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ABSTRACT

The papers presented at the 1982 Spring Meeting of the Nebraska Library Association include: (1) "Online Catalog Cooperation among LIRS [Library Information Retrieval System] Libraries" by Roxanne Sellberg; (2) "The New 'MLA Bibliography': One Bibliographer's Perspective" by Elaine A. Franco; (3) "Serial Cancellation Programs in Academic Libraries in Missouri" by Kay Logan-Peters; (4) "A Serials Deselection Method" by Roy S. Barnard; (5) "Retrospective Conversion: Some Aspects and Approaches to Building a Functional Database of Machine-Readable Records" by Ella Jane Bailey; (6) "Microcomputers: New Marvel Machines for Today's Libraries" by Anita I. Cook; (7) "Problems in Compiling a Biographical Dictionary of the Wars of the Roses" by Robert P. Nash; (8) "Special Historical Reference Materials at the Nebraska State Historical Society" by Ann Reinert; (9) "Bibliographic Instruction for Career Exploration" by John D. Hill; (10) "Practical Considerations in Videotaped Library Instruction" by Thomas A. Tollman; (11) "Analyzing and Dealing with Productivity Problems in the Library Organization" by Carroll Varner (abstract only available); (12) "Library Education in the 80's: Nebraska Wesleyan's Response to the Challenge" by Janet C. Lu; (13)"Four Cartographic Concepts Used in the LC [Library of Congress] MARC Maps Format" by John D. Hill (abstract only available); and (14) "Legal Reference in a Non-Law Academic Library" by Paul F. Hill. (ESR)

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PROCEEDINGS

From The

1982 SPRING MEETING

Of The

NEBRASKA LIBRARY ASSOCIATION

COLLEGE AND UNIVERSITY SECTION

Held At

CONCORDIA TEACHERS COLLEGE

SEWARD, NEBRASKA

APRIL 15-16, 1982

ELAINE A. FRANCO
EDITOR

IR050233

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INTRODUCTION

The papers presented at the 1982 Spring Meeting of the Nebraska Library Association, College and University Section, give some indication of the wide variety of professional activities and research interests pursued by their contributors. Although not restricted by subject, some of the papers reflect the general theme of the Spring Meeting: "On-Line Catalogs: Mechanisms for Cooperation." In addition to the papers presented at the meeting, four skill sessions (not covered in the Proceedings) focused on practical solutions to library problems.

The Executive Board of the College and University Section is grateful for the enthusiastic and well-prepared responses to the call for papers. We apologize for the delay in publishing these Proceedings and for any inconvenience this may have caused those who requested copies. Stan Umberger's acceptance of a position in another state prevented him from completing the editing of the Proceedings and I "inherited" this task as Acting Secretary of the Section. After working closely with this material I have concluded that the papers are worth waiting for and as timely and thought-provoking in their printed form as were the oral presentations last Spring. I think you will agree.

Elaine A. Franco, Secretary
Nebraska Library Association,
College and University Section

November, 1982

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ONLINE CATALOG COOPERATION AMONG LIRS LIBRARIES

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University Libraries
University of Nebraska--Lincoln
Lincoln, Nebraska

ABSTRACT

As its name implies, the Library Information Retrieval System (LIRS) is being developed as an online catalog as well as a circulation system for the three campuses of the University of Nebraska. The combination of these functions will soon allow UN library patrons access to bibliograpic and availability information at the same time. Creation and maintenance of bibliographic and item-level data is a three campus affair. Problems of duplication, overlap and conflict are resolved through negotiation by way of protocols developed and administered by a tri-campus Catalogers Group with the help of a quality control coordinator. Although LIRS evolution has been (and will be) challenging from an online catalog point of view, the mechanisms for tri-campus cooperation have been successful.

The Library Information Retrieval System (LIRS) is an automated library circulation system and union bibliographic finding tool jointly paid for and used by the University of Nebraska libraries at the Omaha, Lincoln, and Medical Center campuses. The software is provided and maintained by DataPhase Systems, Inc., and the hardware is from the Data General Company. The bibliographic database is constructed, for the most part, from OCLC archival tapes. A program of full implementation of circulation functions based on gradual database growth was begun in the spring of 1979 in order to solve the problem of increasingly expensive and cumbersome manual circulation systems at the large university libraries--particularly Don L. Love Library at UN-L. Also anticipated were enhanced public services at all the libraries with particular emphasis on improved loan desk service. Finally, the three campuses wished to make a meaningful investment in the development of an online union catalog. In the short term they planned to create a bibliographic finding tool including access to item status and location as well as bibliographic information about recent acquisitions. In the long term the card catalog might be replaced altogether by an online tool of larger capacity and lower maintenance cost. Those advantages are still far in the future. The LIRS system is at present straining under less than ten years of bibliographic and circulation records. The complications of three campus cooperation have made database maintenance very expensive.

In November, 1975 a study of Love Library circulation services by the UN-L Planning and Research Division paved the way for a switch to an online system. The Hobrock report was satisfied that the manual system functioned reasonably well but recommended that an automated system be considered for installation within the next five years. In the ten previous years, the collection and user population had grown dramatically. Those facts, combined with historical circulation statistics, led the study team to predict that by 1980 Love Library circulation would stretch the capacity of the manual files beyond their perceived limits, and that a score of new regular and full-time equivalent student employees would be needed just to maintain the same level of service.

Fiscal and political reality indicated that money for such staff increases would not be forthcoming. The alternative was an automated system that would reduce needed staff, at least relatively. Automation money was available from various sources which would help cover the initial capital needed for equipment and software purchases. If the other campuses of the University would join the project, an automated circulation system would be feasible, and capability for new intercampus services would surely emerge. The planning for an automated system began almost immediately. The equipment and software were installed in January, 1979. After only a few months of database growth, automated circulation began first at Love Library and soon after at the main Medical Center and Omaha libraries. Branches are receiving their terminals as money permits. Presently about fifty terminals are empowered by a mid-sized, mini-computer housed in the basement of Love Library South. Its capacity will soon be expanded to eight disc drives. Capacity will have to grow even more before the bulk of Love Library's old materials can be transferred to remote storage with LIRS inventory control.

LIRS SYSTEM FUNDAMENTALS

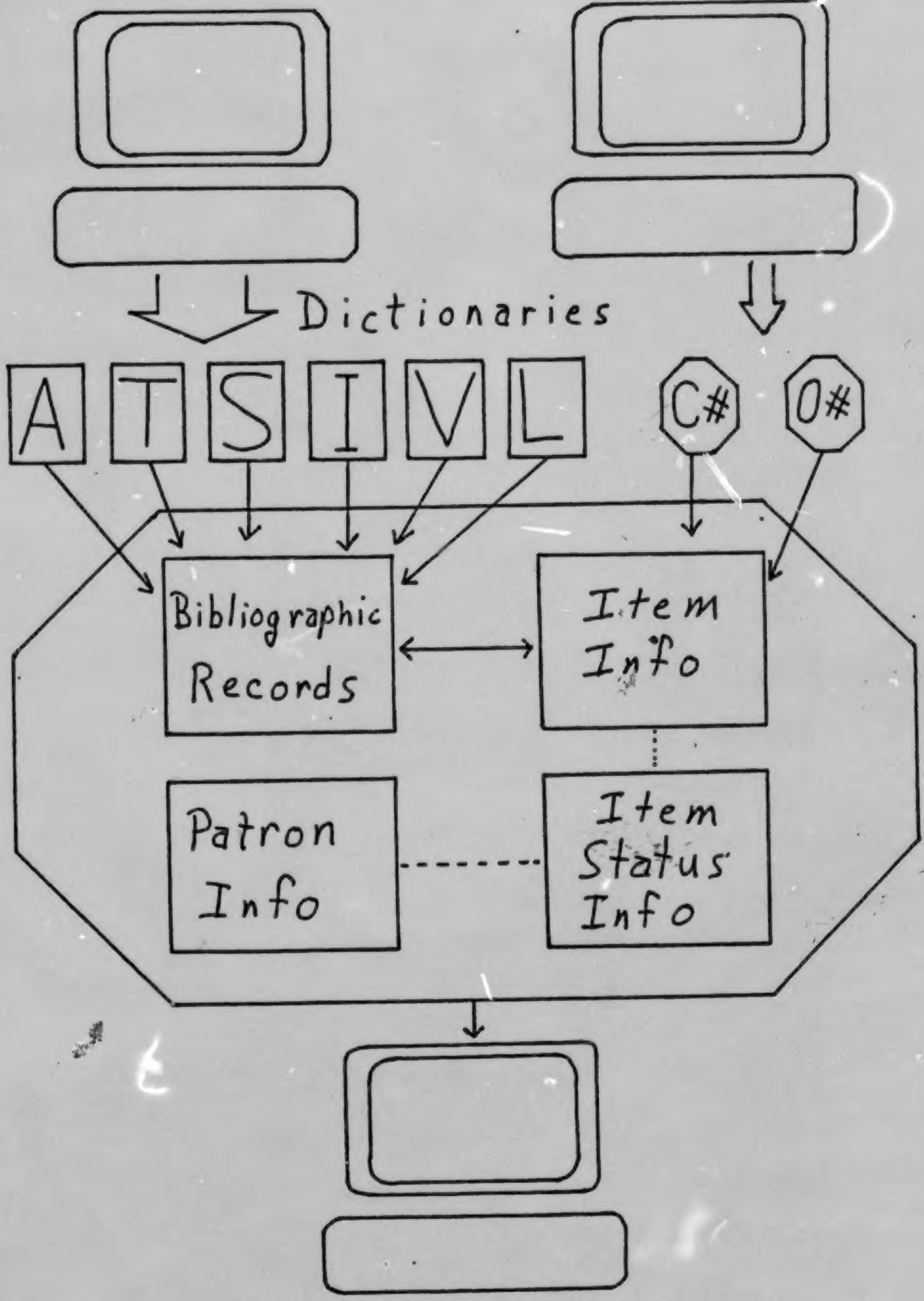
The three campuses of the University share the LIRS system. UNO students, for instance, may use their LIRS cards to charge materials from the UNMC library. Each patron has a record containing personal information linked through his/her Optical Character Recognition (OCR) identification number to a record of all the items s/he has charged. The circulation attendant types or scans a light pen over the patron's ID number and the item's ID number. The computer creates a charge record, sends out overdue notices, computes fines, places holds and recalls, and discharges the item.

All this can happen only if the system can identify the patron and item ID numbers. If the patron has an UN library card, s/he should be recognized by the system because at some time someone typed information about the person into the system and attached it to an OCR number. To make the system recognize a book, for instance, information about the book must be input and an OCR number attached by which that information can be linked to patron information when the book circulates.

The bibliographic record for the book is that group of information fields relevant to all copies of all volumes on all campuses. Thus, the bibliographic database is shared by all campuses. Although there are original cataloging and other bibliographic record loading options, the University libraries have chosen to build their bibliographic database primarily from OCLC archival tapes. All the archival tapes from all the campuses go to the UN computing center where they go through a stripping process. In the interest of saving space, and over the dead bodies of some of the catalogers, a decision was made to eliminate notes, collations and some other fields from the records. After they are "stripped," the records from the archival tapes are loaded into LIRS.

This is a long, painful process because of the UPDATE program. For each record coming into the system, the entire bibliographic database is searched. If there are found records which seem to duplicate the new record, the new record is "kicked" into what is called an update file. Records in the update file must be inspected by a person, compared with the similar records already in the database, and acted upon. The person may decide that the new record is actually unique and will add it to the database, or that the new record is a corrected version of the older record and will replace the old with the new record, or that the new record is actually a duplicate and will "kill" it. Theoretically, this is the process which prevents duplication and identifies possible conflict among campuses cataloging the same materials. Unfortunately, about 50,000 duplicate records were loaded onto the system before the Update Error Processing subfunction was working.

Adding records onto the bibliographic database alone does not make items available for LIRS circulation. For each item described by a given bibliographic record, an item-level record must be made including that group of information fields relevant only to that single item--call number, location, OCR number and volume designation. The item-level record for each piece must be created separately. Since these item-level records have pointers to their corresponding bib-level records, we call the creation of item-level records "linking" or "conversion." When an item is charged, a second temporary link is made from the item-level record to the patron charge record. In the patron-oriented INQUIRY function of LIRS, the user can search for a bibliographic record through search keys of title, responsible party, subject, ISSN-ISBN, vendor number (in this case OCLC number), or LCCN and retrieve not only the bibliographic record but also the attached item-level records and availability information. On the other hand the user can search for an item-level record through OCR number or call number and retrieve not only the item-level record but also the bibliographic record and availability information. Certain passwords allow users to find out to whom the item is charged and when it is due. Attached is a graphic representation of this file structure.


Dictionaries
A
T
S
I
V
L
C#
O#
Bibliographic Records
Item Info
Patron Info
Item Status Info

STRUCTURE OF AUTHORITY AND COOPERATION

Major policy decisions have been made by the University of Nebraska Council of Libraries (UNCL) made up of the library directors. One person acts as project director, bringing issues and technical advice to the committee and seeing to it that the directors' decisions are carried out. Right now one of the directors, UN-L's Dean Gerald Rudolph, is assuming that role. Each campus has a LIRS coordinator. The coordinators' responsibilities are great but their duties are vague. There is an Intercampus Library Planning Committee (ILPC), only one of whose prerogatives is LIRS long-range planning. It is kind of a new group which has not yet exerted much influence on LIRS management or development. Each campus has representatives on two other committees where the bulk of day-to-day cooperation takes place--the Circulation/LLL Committee and the Catalogers Group. These two groups report to UNCL through the project director.

UNL, being the keeper of the computer and its biggest user, assumes greater responsibilities than UNO or UNMC. There are times when all three campuses wish that this were not true. The computer operations staff works for UNL, and UNL's systems librarian spends practically all of his time with LIRS. The LIRS intercampus Circulation/LLL and bibliographic quality control coordinators work for UNL. The intercampus bibliographic quality control coordinator monitors the bibliographic activity of all three campuses, acts as the primary resource person and secretary to the Catalogers Group, and designs and documents intercampus cooperative activities pertaining to bibliographic input and maintenance. She reconciles record disputes and enforces the policies of the Catalogers

Group--officially, that is. So far decisions have been made and carried out by consensus of concerned parties. The eight people she supervises sometimes perform maintenance activities for all three campuses. For instance, it has seemed best to centralize serial records duplicate clearance. Attached is a graphic representation of the LIRS authority structure.

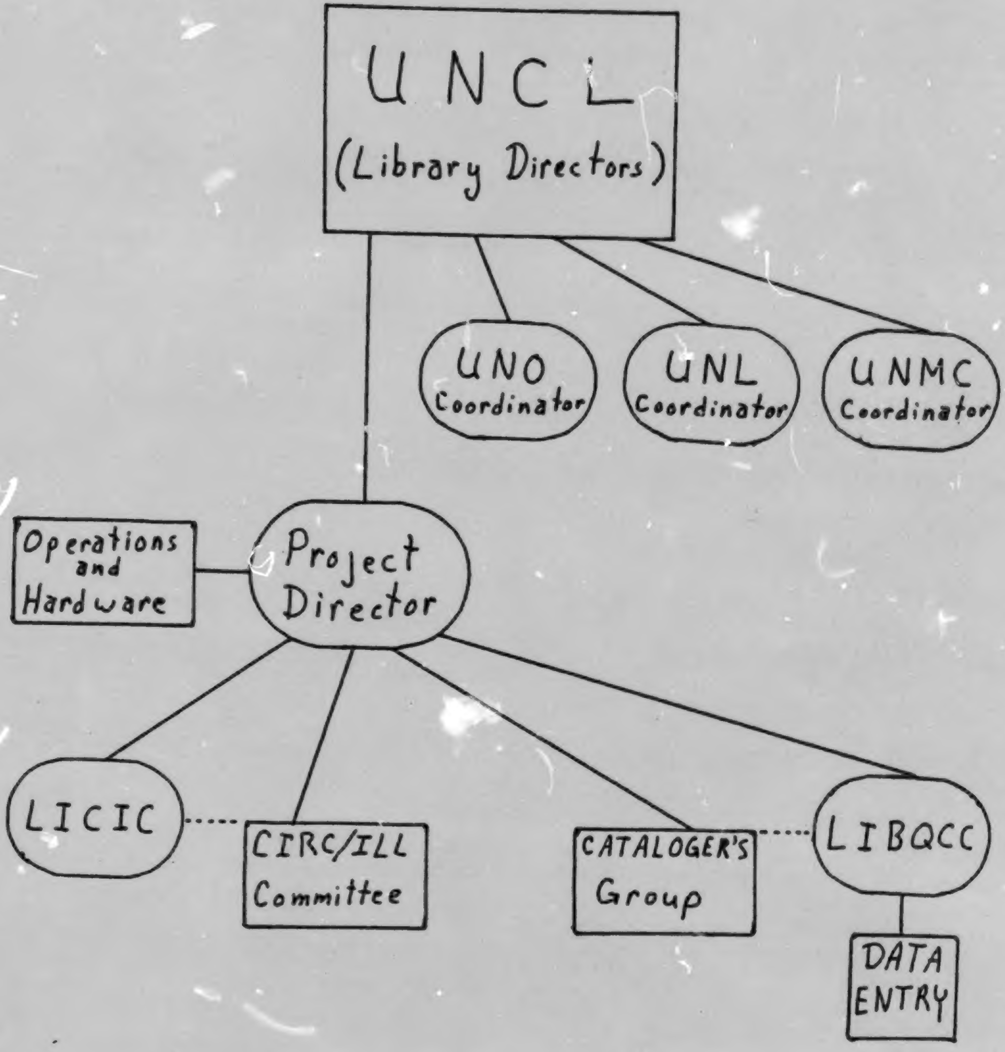
AREAS OF TRI-CAMPUS COOPERATION

Areas of intercampus LIRS cooperation indirectly affecting the online catalog will only be mentioned. Any of the directors may be approached for more complete information. In chronological order: first came writing specifications, taking bids, and deciding upon a system. At that time there were not many companies in the online circulation business. DataPhase promised a more flexible system with better online catalog potential than did CLSI at a lower price than Virginia Polytechnical Institute.

Second was the negotiation of the DataPhase contract. At that time ALIS (Automated Library Information System--the DataPhase system before UN renamed it) was barely a paper promise. Fortunately, some University of Nebraska ideas were used in the eventual system design. Unfortunately, DataPhase thought they would be able to provide more capabilities than they have been. The author is suspicious that some promises were made because DataPhase did not clearly understand the differences between one library system in several locations using ALIS and several separate library systems using ALIS together.

Third came parameters, which had to be decided upon in a period when the librarians at the University did not understand the system very well and could not see it work. One area of confusion was the media code

LIRS
Structure of Authority and Cooperation


UNCL
(Library Directors)
UNO Coordinator
UNL Coordinator
UNMC Coordinator
Operations and Hardware
Project Director
LICIC
CIRC/ILL Committee
CATALOGER'S Group
LIBQCC
DATA ENTRY

list. The three campuses share a list of media codes which, it has turned out, are simply labels that designate loan periods. In order that circulation statistics can be broken down by type of material, a different media code may be assigned to an overnight book as opposed to an overnight sound recording. Eventually the agreed upon list of media codes became too long. Consider the employee who has to decide whether a piece of music is:

media code	definition
300	Printed Music (General)
301	Music Manuscript (Non-circ)
302	Sheet Music (Score)
303	Score
399	Music (Non-circ)

Fourth, still constantly renegotiated are questions about "when who can do what" on the system. For instance, tape loading should be done during non-open hours. Two campuses should not run notices at the same time. Dictionary-intensive functions should be used at non-peak circulation hours. Circulation takes priority if response time is slow. There are still occasional problems between campuses in this regard.

Areas of negotiation directly related to the online catalog will be treated in more depth. Mentioned before was the director's decision to create the bulk of the bibliographic database from shortened MARC OCLC archival tapes. UNMC was also allowed to load some tapes of short, non-OCLC records that they had made for other purposes. It was up to the Catalogers Group to decide what to do with them, how to locate and eliminate duplicates, resolve conflicts among cataloging agencies, develop procedures for database maintenance, and get the collections converted as quickly as possible. The group approached this monumental job from two directions.

First, its members foster increasing awareness on all campuses of the need to standardize cataloging and conversion practice, thereby reducing conflicts in the future. The members of the Catalogers Group may commit their libraries to cataloging as well as LIRS practice, subject to UNCL approval. The group has adopted guidelines for choosing among duplicate records on OCLC, but UNO and UNL insist upon using LC copy when it is available, and UNMC insists upon using NLM copy when it is available. The group has agreed that U of N recatalogers will use a first indicator "2" in the 049 field whenever possible to avoid duplication in the database. Records with such an indicator are bypassed by the LIRS system altogether. Any corrections made in the catalog by card set reorder must be edited separately on LIRS. The three campuses have also agreed to trade serial extra cards; that is, when one campus catalogs or recatalogs a serial, that campus sends the other campuses copies of the new cataloging. Hopefully this will increase the similarity of cataloging among the three schools. Recently, UNMC adopted AACR II Cataloging rules and LC authority file name headings. Now that all campuses use the same form of name at the time of cataloging, conflicts will be reduced significantly. The problems that remain in this area of standardized cataloging are: 1) that the serial xc trade has not yet had the intended effect, and 2) different policies about printing and publishing dates too often lead to identical OCLC records being used for non-identical pieces or identical pieces cataloged on different OCLC records. The future will tell whether efforts at standardization decrease the burden of conflict resolution and duplicate clearance which currently rests with the LIRS bibliographic staffs from all three campuses.

Second the Catalogers Group formulates ways to deal with the existing database. So far the bulk of their efforts have been directed toward the problem of duplicate bibliographic records. Duplicate cataloging in the LIRS system is found two ways. The more convenient way is in the update file. Each campus sees only the update records it has input and is authorized to deal with them. A tape loading order is to be observed which gives the campuses an approximately equal chance to be "first in" and spreads the update file clearance responsibilities as evenly as possible. The plan assumes that each school receives and catalogs pieces held in common at nearly the same time. That is not true of course. Problems interfering with tape loading order have been a source of strain between the campuses. The first task of the person looking at update records is to determine which are actually duplicates. It often boils down to judgment and experience. If the difference between the update and database records might be due to CIP copy cataloging, the OCLC members should be the same--everything else including title and imprint may be different. If the OCLC numbers are different, the titles and imprints just about have to be the same if the records are duplicates. It is the responsibility of the campus trying to add a new record to make the judgment and, if necessary, to call the other holding campuses to compare pieces.

The less convenient way duplicates are discovered is when they are already in the database. When an employee is trying to locate a bibliographic record, (usually during conversion) s/he may find several similar records. A major turning point in the history of NU catalog cooperation was the adoption of protocols for monographic conversion in the presence of duplicates according to these principles:

1. There will be a prescribed conversion choice for every set of duplicates insuring that all campuses with identical holdings will attach their item-level records to the same bibliographic record.

2. The duplicate records not chosen will be reported to the schools that input them.

3. The schools that input the duplicate records not chosen for conversion will be responsible for clearing their duplicate records from the database after verifying that they are duplicates.

4. Certain modifications to the conversion choice record may be made in order to make it acceptable to the schools which did not input it.

5. The rule for conversion choice is "latest version from the first school in." That is, the school whose record was input first (signified by lowest bibliographic identification number) will be chosen. If that school later recataloged the material, the most recent version should be chosen. If duplicate records for a certain material were found in this order:

   #10001 NBU
   #20001 LDL
   #30001 UNM
   #40001 UNM
   #50001 LDL
   #60001 NBU

   Number 60001, UNO's second duplicate, would be chosen for conversion. The exception to this rule is the short non-OCLC record which is ignored for the purposes of conversion choice in duplicate situation. Brief records are only used when there is no alternative:

   #11320 UNM (Brief)
   #23201 LDL
   #31023 NBU

   In the above situation, the LDL record is the conversion choice.

Schools are notified of their unwanted duplicates on LIRS Monographic

Duplicate Report Sheets. An example is attached. The reporting campus keeps the original and makes copies for the other campuses. Each school prints out the conversion choice records and any of its own duplicates, and they are compared carefully. The duplicate processor judges whether or not the records are actually duplicates. If so, the inputting school must delete its unwanted duplicates. Sometimes mistakes are made in conversion, of course. Occasionally that "first school in, latest version" business confuses people. The mistakes are usually found when a school tries to delete its own unwanted duplicate and finds that item-level records are attached. The machine won't allow the deletion of a bib-level record to which item-level records are attached. If the inputting school made the conversion error, its employee simply moves the item-level records and deletes the bib-level record. If some other school made the conversion error, however, that school must be informed of the error. A Linked Record Change Request Form (example attached) is used for this purpose. After the inputting school is informed of its conversion error and moves its holdings, that school just deletes the unwanted bib-level record. This is the only time one school may kill another school's bib-level monographic record.

Of course, the formula for determining conversion choice is not based on quality. Many times a duplicate to be killed is quite a bit different or even quite a bit better than the conversion choice. Protocols have been set up for making the conversion choice bibliographic record acceptable to everyone who must link items to it. These protocols also apply when a school must kill its duplicate record in the update file in favor of an unacceptable record already in the database. Despite the fact that UNO and UNL catalog by about the same rules, and despite the fact that

LIRS MONOGRAPHIC BIB RECORD DUPLICATE REPORTING

1. Search each record by title for all conversion and record correction.
2. If there are duplicate records for the same title select the conversion choice according to the criteria below. The 049 (inputting library) field is used in the selection process; if there is no 049 field the inputting library is "LDL." Compare first three letters only.
   a) Choose the first record in the display. Example: 049 LDL
   NbU take LDL
   UNM

   b) If there is more than one record for the first inputting library choose that library's latest one.
   Example: 049 NbU
   UNM
   NbU take 2nd NbU record
   LDL

   049 UNM
   LDL
   LDL
   UNM take 2nd UNM record

   c) Never choose a brief monographic UNMC record (i.e. in all CAPS) if a full OCLC record is available, even if it is not in the regular conversion choice position.
3. Record the title, then record the bib. # and inputting library symbol of the record used for conversion in the "conversion choice" column, then put the LIRS bib record #s and inputting library symbols for all additional duplicates in the "duplicates not chosen for conversion" column.
4. When the sheet is completed send a copy to each campus whose 049 inputting symbol appears on the reporting sheet.

	CONVERSION CHOICE		DUPLICATES NOT CHOSEN FOR CONVERSION	
TITLE	LIRS BIB REC'D #	049 SYMBOL	LIRS BIB REC'D #	049 SYMBOL
She loves me, she loves	140345	NBU	20712	NBU
me not :			31234	UNL
Congenital heart disease	1234	UNL	2345	(brief) UNM
a statistical analysis /				

Reporting Library LDL

Date submitted 820409

LINKED RECORD CHANGE REQUEST FORM

TITLE	OCR#	WRONG BID#	RIGHT BID #
Moby Dick: the story of a great	R0207374240	45237	5902
National geographic atlas of the world/	R0206772443	73254	2905

UNMC's collection is so different from the other two, the number of hours spent doctoring conversion choices is staggering. Consequently, LIRS online maintenance has been very expensive so far. The duplicate resolution process has also added a cataloging quality check at all campuses which has resulted in increases in card catalog maintenance as well. Since LIRS records are "composite" records, they end up being like none of the campuses card records. That complicates things in ways which may become clear to the reader later. Attached is a typical composite record. The underlined parts were added to the original UNMC record by UNL.

Although there are a myriad of kinds of conflicts among duplicate records, the Catalogers Group has divided them into three categories according to how they are resolved: minimal changes, significant changes, and unreported changes. In order to make a conversion choice record acceptable to his/her own school, a LIRS employee may add access points from his/her own school's killed record at will. If UNO's duplicate record shows, for example, that the material is about "disease" and the UNM record shows that the material is about "pathology," the composite record will show that the material is about both "disease" and "pathology." No record is made of the addition; hence, it is called an unreported change. However, the school which added the extra subject heading or makes any other change also adds a special 910 field "claiming" the record: 910 UNL820412rjs (UNM)* The record now belongs to the whole university.

*UNL is the editing agency. The inputting library is added at the end because of a system bug. The inputting library field disappears if the record is tampered with.

TYPICAL LIRS COMPOSITE BIBLIOGRAPHIC RECORD

BIBLIOGRAPHIC INFORMATION FROM DATABASE RECORD NO 27016

```
LDR      00843nam  22002178i  45 0
001      ocL76085878
008      800214c19801979nyu       b     00110 engm
010      #a   80011721
019      #aocL78659432
049      #aUNMA
050  0   #aRJ50#b.E913 1980
062      #aWS 141 E94d
100  10  #aEwerbeck, H.#q(Hans),#d1919-#wcn
240  10  #aDifferentialdiagnose von Krankheiten im Kindesalter.#lEnglish.
245  10  #aDifferential diagnosis in pediatrics :#ba compendium of
          symptoms and fingings /#cby Hans Ewerbeck.
250      #aAmerican ed. /#btranslated and rev. by Judith Remischovsky.
260  0   #aNew York :#bSpringer-Verlag,#cc1979.
650   0  #aChildren#xDiseases#xDiagnosis.
650   0  #aDiagnosis, Differential.
650   2  #aDiagnosis, Differential#xIn infancy and childhood#xHandbooks.
650   2  #aPediatrics#xHandbooks.
700  10  #aRemischovsky, Judith.#wcn
910      #aUNL820421rjs (UNMA)
```

The inputting school may not replace or significantly change it because there is something in the composite that another school thinks is important.

If one school wishes to add to a conversion choice record some field which is not an access point (such as an edition statement) or some part of some field (such as a second publisher or authorship statement), it may do so but must notify the inputting school on a special form so that the inputting school might correct its cards accordingly. Correction of obvious typos also falls into the category of minimal change. A sample Minimal Change Report Form is attached. Significant changes are those which the inputting school may wish to dispute (such as publication date--the editing school may be trying to link item-level records to a bibliographic record that its items don't really match) or which correct mistakes which may warrant the inputting school's attention (such as name headings that defy authority). At any rate, they are so important that the inputting school is asked to make the change rather than simply read a report of the change. The LIRS Significant Change Request Form (attached) is simply a modified version of the OCLC Significant Change Request Form and also requires evidence such as xeroxed title page or OCLC authority record printout. UNO and UNL can ask each other to change headings to the Library of Congress form because both UNO and UNL use LC as their name authority. Until recently UNMC used National Library of Medicine headings. In cases of conflict between UNL or UNO and UNMC, two headings for the same name could appear on the composite record. UNMC's switch to LC authority should put an end to such practice. Also related to AACR II, the Catalogers Group recently approved the expanded category of

LIRS MINIMAL CHANGE REPORT FORM

Date submited 040882

Reporting Library LDL

Reported by	Bib #	Old tag, indicator or text	New tag, indicator or text	Inputting Library
Rjd	43210	260 ... Harcord...	... Harcourt...	UNM
BL	12340	245 ≠b proceedings..	≠b proceedings of	NBU
			symposium on	
			potentially hazardous	
			chemicals.	

LIRS SIGNIFICANT CHANGE REQUEST FORM

BID number 432105
DATE 820415

INPUT BY LDL
(OCLC SYMBOL 040 ‡c)

REPORTED BY NBU
(OCLC SYMBOL)

SIGNATURE Harvey James

INSTRUCTIONS
Complete entire top part of form and return it to inputting library. It will be returned after action is taken. Print in ink or type clearly.
Underline parts to be changed.
Staple photocopy of authority for changes in upper left corner: 3X5 in. copy or smaller to front; larger items to back.
See "Guidelines Document" for more detailed information.
Cite authority (e.g. LC-MARC) State if error(s) self evident. OCLC authority attached

AUTHOR (1XX) Smith, James Brown

TITLE (245‡a) Down the garden path

FIXED FIELD	FIXED FIELD CODE:						
	REQUESTED CHANGE:						

TAG # 700
TEXT FROM RECORD: Caldwell, Peter C.
REQUESTED CHANGE: Caldwell, Peter Courtney, 1916-

TAG #
TEXT FROM RECORD:
REQUESTED CHANGE:

TAG #
TEXT FROM RECORD:
REQUESTED CHANGE:

TAG #
TEXT FROM RECORD:
REQUESTED CHANGE:

Action taken: Corrected
by: BJ
Date: April 12, 1982

unreported changes to include the substitution of verifiable LC pre-AACR II headings with a verifiable LC AACR II headings.

DataPhase is developing a system capability to put both subject and name heading cross references into the LIRS database and to make multi-record heading changes in order to eliminate split online files. It will be the Catalogers Group's next big challenge to develop protocols about who may make this kind of change and under what circumstances. In the not too near future it may be possible to load a program which would compare the headings on LIRS to LC's subject or name authority or to a machine readable local name authority file. Some limited automatic flipping of headings similar to OCLC's pre-AACR II flip may even be possible. Right now the LIRS database contains both Mark Twain and Samuel Clemens, both Russia--History and Soviet Union--History with no links between them. Pre-AACR II headings are not now routinely changed to AACR II on LIRS even though they are changed in the card catalog, because of the work involved and because hopes are high for the development of online dictionary maintenance.

Maintaining serials records in the LIRS database is going to be--and already is--extremely complicated for three reasons. First, short, non-OCLC records loaded onto the database by UNMC have local fields that must be preserved and already have some item-level records attached. They cannot just be killed in favor of far better OCLC duplicates. Either the holdings and local fields must be transferred to better records (which takes a long time) or the better records must be superimposed upon the brief records to make composites (which takes a long time).

Second, the three campuses did not switch over from latest to successive entry serials cataloging at the same time nor in a consistent way. Anyone with some familiarity with serials cataloging can imagine with horror the tortures necessary to figure out which cataloging records refer to the same serials, which differences are mistakes and which result from differing approaches, and how to make composite records without everyone having to recatalog, rebind, reshelve, etc. So far it has seemed wisest to let the quality control coordinator and her staff resolve all the duplicate situations they can before full scale conversion (linking of item-level records to bibliographic records) begins.

Third, serials cataloging just goes on and on. A serials cataloging record cannot be forgotten once the serial is cataloged. At the very least it has to be closed at some time. Often serials will change titles, merge, split, fragment, and overlap during their publishing lives. The Catalogers Group has not yet figured out a way to insure agreement of holding campuses about when these changes occur and how to handle them. The xc trade is not adequate. Centralized reporting of changes may be the answer, which will involve the serials catalogers of the three campuses in LIRS more than before. Considering the number of conflicts found so far, the final source of serials decisions has his/her/their work cut out for him/her/them.

CONCLUSION

Based on certain problems the LIRS project has faced, the author wishes to advise those considering an online bibliographic database shared with other libraries to select those libraries as much as possible according to similarity of library type and bibliographic approach. Had they to do it over with more flexibility of options, the librarians at UNMC might think twice before casting their online database lot with general college libraries. They might prefer to buy their own small online system or join together with other medical libraries.

The more planning that can be done before database loading begins, the better. The initiate is advised not to load a database until the vendor or local programmers have produced a good approximation of what was contracted for. The "buyer" should demand a detailed written explanation of how all parts of the system work or will work and how all displays look or will look, so that parameters can be set in a reasonable, informed way, and that problems can be anticipated and prevented. Any involved vendors should be urged to assure in writing that the system's storage is large enough for at least five years' projected growth, and that response time will be reasonable even when all terminals are in use or when a "background job" is occupying part of the system. Even if guarantees are not possible, such discussions will ensure that everyone involved is aware of these issues. "Free enterprise" types involved in the project must be under pressure to deliver and maintain the best system they can; they do not always share the librarian's compulsion to provide good service. Every possible detail should be agreed to by participating libraries in writing. Methods of decision-making, division of authority and responsibility, procedures and schedules should be worked out as early as feasible and strictly adhered to. It is all too easy for one library to feel left out or oppressed or for conflicting directions to confuse lower level employees.

Card catalogs should be given up with reluctance. Before card catalogs are eliminated or even just "frozen," downtime on the new online system must be virtually nonexistent or a backup available, public service staff should be intimately familiar with the functions, procedures and hybrid records of a shared online system, the bugs should be worked out, some check on completeness of data should be made, and the system should be stable. Although periodic software changes may make some improvements in the system, they also necessitate retraining, redocumenting and re-orientating patrons.

Finally, money and time savings should be de-emphasized as the rationale for switching to a cooperative online catalog. The "initial" expenditures for system implementation of any computerized system are huge, and capital outlays stretch over a long time--especially since manual and online systems usually overlap (both are maintained during a switchover period) and database building requires trained staff a relatively long period. For reasons outlined in this paper as well as others outside its scope, cooperative ventures require even more work and patience, decreasing and postponing any money or staff time savings which may eventually be realized through the adoption of an online catalog.

THE NEW MLA BIBLIOGRAPHY: ONE BIBLIOGRAPHER'S PERSPECTIVE

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ABSTRACT

The Modern Language Association of America (MLA) has adopted a new indexing system for compiling its annual MLA International Bibliography. The CIFT (Contextual Indexing and Faceted Taxonomic) Access System requires bibliographers to describe the form and content of each entry in an ordered sequence, using standardized terminology. These descriptions will be used to create a classified bibliography as well as an alphabetical subject index. The 1981 Bibliography (to be published in 1982) will provide a more detailed subject analysis of each entry, tailored to the idiosyncrasies of literary and linguistic scholarship, and will be more accessible for computer and manual searching.

The MLA International Bibliography of Books and Articles on the Modern Languages and Literatures is the most comprehensive bibliography of its kind in the field of language and literature. Drawing from more than 2,000 journals, the MLA Bibliography provides an annual classified listing of approximately 60,000 bibliographical citations for articles and books published on modern languages, literature, folklore, and linguistics. The MLA Bibliography is compiled by the staff of the Center for Bibliographical Services at the Modern Language Association headquarters in New York, with the cooperation of a network of over two hundred bibliographers.

The Modern Language Association (MLA) recently adopted a new indexing system for compiling the annual _Bibliography_. The system is being implemented this year for the _Bibliography_ covering 1981 citations (scheduled for publication in the fall of 1982). With funds from the National Endowment for the Humanities, in 1978 MLA had undertaken an eighteen-month Bibliography Revision Project to review the _MLA Bibliography_'s taxonomy and method of indexing, with the prospect of revision and expansion. Consideration was given to the sources and compilation methods of comparable bibliographies, and to the methods of retrieval used in other bibliographic systems. The MLA Executive Council appointed a seven-member Advisory Board to supervise the Bibliography Revision Project, including a general bibliographer, a research librarian, a specialist in library science, and scholars representing the fields of English, foreign languages, comparative literature, and linguistics.

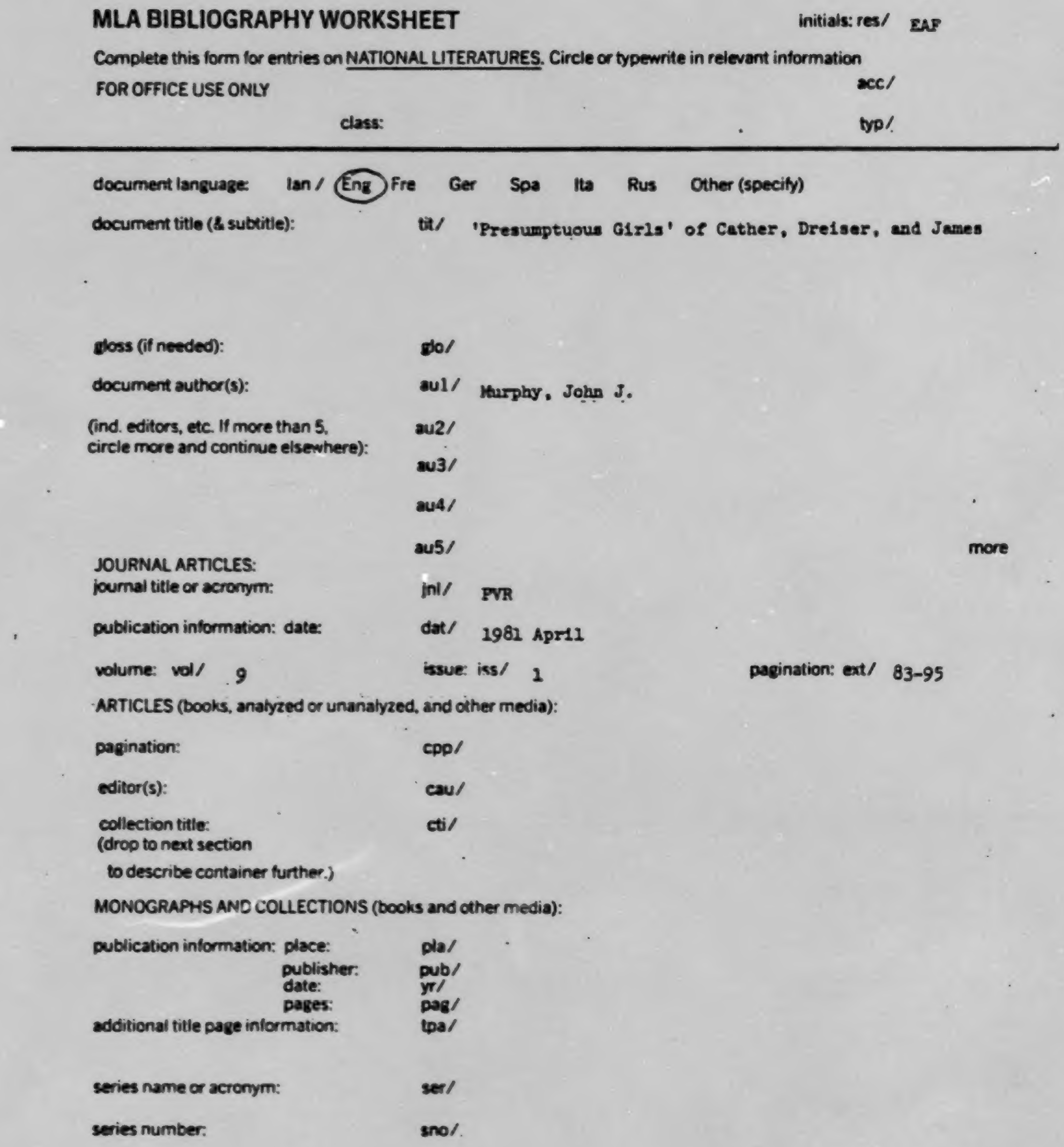
Various indexing systems were studied as possible means for providing better subject access to the _MLA Bibliography_, including the keyword title index, the augmented keyword title index, the alphabetical subject index, and the Contextual Indexing and Faceted Taxonomic Access System (CIFT). After much discussion, study, and testing, CIFT was chosen by the Advisory Board as the system to be used for the _MLA Bibliography_. CIFT is a new system of indexing and classification which was developed in the course of the Bibliography Revision Project. The CIFT system was to be used for the _Bibliography_ covering 1980. It was decided to delay implementation, however, and to spend a year refining the system while compiling the 1980 _Bibliography_ in the traditional manner.

Under the CIFT system bibliographers prepare a worksheet for each entry. There are four different types of worksheets: yellow for general literature and related topics, pink for national literatures, green for language and linguistics, and blue for folklore. The first side of the sheet is designed for the bibliographic description of the item. Bibliographers using the CIFT system need not be overly concerned with the details of the citation. Much of the punctuation, spacing, etc. is handled by computer. The reverse side of the sheet is reserved for the subject indexing. The four types of worksheets differ slightly on the subject indexing side.

The CIFT system will provide both a classified listing and a subject index for the MLA Bibliography. This classification system is not radically different from the Bibliography's traditional taxonomy of language and literature, but it is an open-ended rather than a closed system. The CIFT system is very flexible with regard to the arrangement of the classification, the level of subject description, and the number of index entries or classification positions produced per item. CIFT requires bibliographers to describe the content and form of bibliographic items (typically journal articles) in terms of an ordered sequence of facets. Facets are categories of information relevant to language, literature, and folklore studies, such as place, period, genre, language or literature, persons, works, themes, influences, and theories. The facets encompass, but go beyond, the classification categories traditionally used by the MLA Bibliography. In answering the questions represented by the facet categories, the bibliographers provide descriptors for the subject index. A descriptor is any word or phrase that describes the content of an item. Some of the descriptors will be used to create a classified arrangement of entries in the *Bibliography*. All of the descriptors will be used to give a brief description of the item and to form an alphabetical subject index. The descriptor should be the most specific term applicable to the item, chosen on the basis of the wording used in the item and the bibliographer's expertise. Role indicators can be used to further modify the descriptors. (See fig. 1-2.) A thesaurus is being developed which will provide references from synonyms and narrower, broader, and related terms in the index. Terminology used by bibliographers to describe the items they compile will be checked against the thesaurus to achieve consistency, although the bibliographers will not be limited to those terms found in the thesaurus.

CIFT is a string index system as well as a faceted system. Descriptors chosen to define an item will form a unified sequence or string. These strings will appear after the citation in the classified section and will be repeated under headings in the subject index to provide a context for the index and the classified entries. Users of the *Bibliography* will thus be able to judge the relevance a particular item may have to their research needs. (See fig. 3.)

The new system will provide a more detailed subject analysis than did the classification system used for the *MLA Bibliography* through 1980. Items will be indexed to the level of individual work under individual literary authors, to narrow topic for general literature and folklore, and to minor linguistic aspect for language and linguistics. Further indexing is possible, according to themes, influences,



MLA BIBLIOGRAPHY WORKSHEET initials: res/ EAF

Complete this form for entries on NATIONAL LITERATURES. Circle or typewrite in relevant information

FOR OFFICE USE ONLY acc/

class: typ/

---

document language: lan / [✓ Eng] Fre Ger Spa Ita Rus Other (specify)

document title (& subtitle): tit/ 'Presumptuous Girls' of Cather, Dreiser, and James

gloss (if needed): glo/

document author(s): au1/ Murphy, John J.

(incl. editors, etc. If more than 5, circle more and continue elsewhere): au2/

au3/

au4/

au5/ more

JOURNAL ARTICLES:

journal title or acronym: jnl/ PVR

publication information: date: dat/ 1981 April

volume: vol/ 9 issue: iss/ 1 pagination: ext/ 83-95

ARTICLES (books, analyzed or unanalyzed, and other media):

pagination: cpp/

editor(s): cau/

collection title: cti/
(drop to next section
to describe container further.)

MONOGRAPHS AND COLLECTIONS (books and other media):

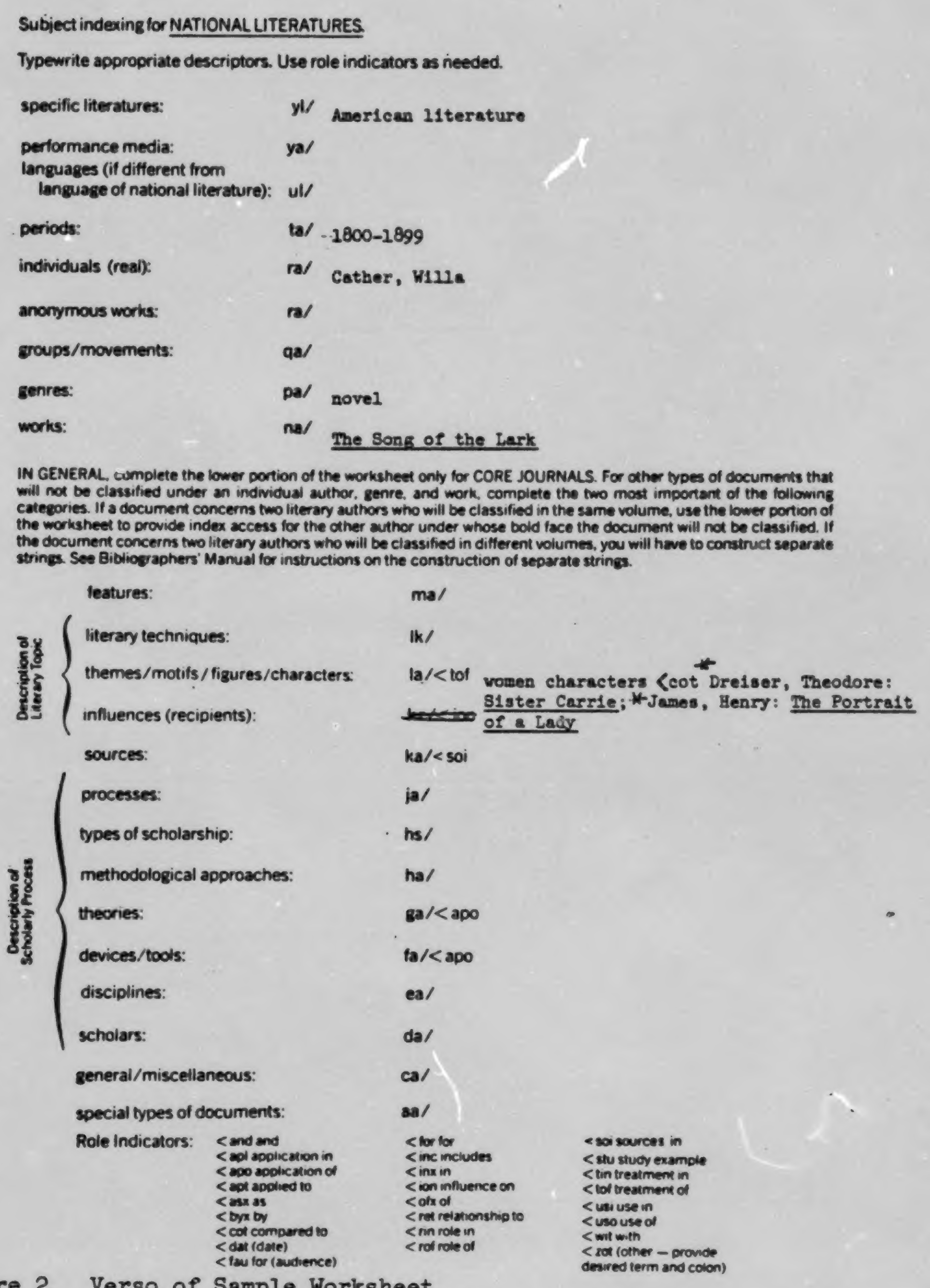
publication information: place: pla/
publisher: pub/
date: yr/
pages: pag/

additional title page information: tpa/

series name or acronym: ser/

series number: sno/

Figure 1 Recto of Sample Worksheet



Subject indexing for NATIONAL LITERATURES.

Typewrite appropriate descriptors. Use role indicators as needed.

specific literatures:	yl/	American literature
performance media:	ya/	
languages (if different from language of national literature):	ul/	
periods:	ta/	1800-1899
individuals (real):	ra/	Cather, Willa
anonymous works:	ra/	
groups/movements:	qa/	
genres:	pa/	novel
works:	na/	The Song of the Lark

IN GENERAL, complete the lower portion of the worksheet only for CORE JOURNALS. For other types of documents that will not be classified under an individual author, genre, and work, complete the two most important of the following categories. If a document concerns two literary authors who will be classified in the same volume, use the lower portion of the worksheet to provide index access for the other author under whose bold face the document will not be classified. If the document concerns two literary authors who will be classified in different volumes, you will have to construct separate strings. See Bibliographers' Manual for instructions on the construction of separate strings.

	features:	ma/	
Description of Literary Topic	literary techniques:	lk/	
	themes/motifs/figures/characters:	la/< tof	women characters <cot Dreiser, Theodore: Sister Carrie; James, Henry: The Portrait of a Lady
	influences (recipients):	~~ia/<ion~~	
	sources:	ka/< soi	
Description of Scholarly Process	processes:	ja/	
	types of scholarship:	hs/	
	methodological approaches:	ha/	
	theories:	ga/< apo	
	devices/tools:	fa/< apo	
	disciplines:	ea/	
	scholars:	da/	
	general/miscellaneous:	ca/	
	special types of documents:	aa/	

Role Indicators:

- < and and
- < apl application in
- < apo application of
- < apt applied to
- < asx as
- < byx by
- < cot compared to
- < dat (date)
- < fau for (audience)
- < for for
- < inc includes
- < inx in
- < ion influence on
- < ofx of
- < ret relationship to
- < rin role in
- < rol role of
- < soi sources in
- < stu study example
- < tin treatment in
- < tof treatment of
- < usi use in
- < uso use of
- < wit with
- < zot (other — provide desired term and colon)

Figure 2 Verso of Sample Worksheet

SAMPLE CLASSIFIED LISTING FOR REVISED MLA BIBLIOGRAPHY

English literature. 1700-1799.
Radcliffe, Ann (1764-1823).
Novel.
Mysteries of Udolpho. Sedgwick, Eve Kosofsky. "The Character in the Veil: Imagery of the Surface in the Gothic Novel." *PMLA*. 1981 March; 96(2): 255-270.

SAMPLE SUBJECT INDEXING FOR REVISED MLA BIBLIOGRAPHY

GOTHIC NOVEL
English literature. 1700-1799. Novel: GOTHIC NOVEL.
Radcliffe, Ann (1764-1823). *Mysteries of Udolpho*; *The Italian* and Lewis, Matthew Gregory (1775-1818). *The Monk*. Use of Surface imagery. Treatment of Sexual function of Veils. Psychoanalytic approach.
IMAGERY
English literature. 1700-1799. Novel: Gothic novel.
Radcliffe, Ann (1764-1823). *Mysteries of Udolpho*; *The Italian* and Lewis, Matthew Gregory (1775-1818). *The Monk*. Use of Surface IMAGERY. Treatment of Sexual function of Veils. Psychoanalytic approach.
LEWIS, MATTHEW GREGORY (1775-1818)
English literature. 1700-1799. Novel: Gothic novel.
Radcliffe, Ann (1764-1823). *Mysteries of Udolpho*; *The Italian* and LEWIS, MATTHEW GREGORY (1775-1818). *The Monk*. Use of Surface imagery. Treatment of Sexual function of Veils. Psychoanalytic approach.
PSYCHOANALYTIC APPROACH
English literature. 1700-1799. Novel: Gothic novel.
Radcliffe, Ann (1764-1823). *Mysteries of Udolpho*; *The Italian* and Lewis, Matthew Gregory (1775-1818). *The Monk*. Use of Surface imagery. Treatment of Sexual function of Veils. PSYCHOANALYTIC APPROACH.
RADCLIFFE, ANN (1764-1823)
English literature. 1700-1799. Novel: Gothic novel.
RADCLIFFE, ANN (1764-1823). *Mysteries of Udolpho*; *The Italian* and Lewis, Matthew Gregory (1775-1818). *The Monk*. Use of Surface imagery. Treatment of Sexual function of Veils. Psychoanalytic approach.
SEXUAL FUNCTION
English literature. 1700-1799. Novel: Gothic novel.
Radcliffe, Ann (1764-1823). *Mysteries of Udolpho*; *The Italian* and Lewis, Matthew Gregory (1775-1818). *The Monk*. Use of Surface imagery. Treatment of SEXUAL FUNCTION of Veils. Psychoanalytic approach.
VEILS
English literature. 1700-1799. Novel: Gothic novel.
Radcliffe, Ann (1764-1823). *Mysteries of Udolpho*; *The Italian* and Lewis, Matthew Gregory (1775-1818). *The Monk*. Use of Surface imagery. Treatment of Sexual function of VEILS. Psychoanalytic approach.

Figure 3 The String Index

methodological approaches, etc. Improved subject access through a subject index will be a great improvement over former editions of the Bibliography. Titles for articles on literary criticism are often cryptic. A title may include a literary quotation or allusion and not explicitly state the topic of the article.

Subject access to the MLA Bibliography in its current form is probably best in the national literature sections. Most entries are grouped by national literature, then further subdivided by chronology. A user searching for material on an individual literary author will probably find it easily enough, with some exceptions. Literary authors who have written in two languages may be found under two national literatures. It is necessary to determine the correct classification when searching for authors whose works cross over century boundaries.

Access to general subjects is not entirely satisfactory under the traditional classification system. Someone looking for articles on feminist criticism, for example, would have to read through all the materials listed under literary criticism in the general literature section, trying to determine from their titles what articles might be relevant. This user might want to look at the criticism subsection in the twentieth-century section of a national literature to locate materials dealing with feminist criticism as applied to a particular national literature in the twentieth century. The search would be expanded if the user wanted materials dealing with various centuries and various literatures. The MLA Bibliography is now available online through the Dialog System. Using the online version of the Bibliography, the user looking for material on feminist criticism could search for words, such as feminist or women. But the online file has a subject index drawn only from the Bibliography's classification structure, the citation titles, and the citation note fields. Thus, if a particular word is not included in the classification structure or the title of the item, a relevant article may elude the searcher.[1]

The present classification system does allow for some cross references, but the new subject index will make it easier for researchers to locate articles that could be classified under more than one heading. This is a typical situation in literary research, where much scholarship is concerned with the influence of author A upon author B, or the treatment of topic X in the writing of author Y, or an analysis of genre Z with examples drawn from authors E, F, and G. The cross reference system that has been used for the MLA Bibliography in the past gives no indication of the kind of relationship between the different headings. The new string system will indicate to a user whether certain connections are worth pursuing.

The CIFT system is new and will probably undergo some refinements after this first year of use. As a student of literature, a cataloger of language and literature materials, and an MLA bibliographer I am anxious to see how successful the CIFT system will be. I think it has great potential as an indexing system for literary and linguistic scholarship.

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1. Eileen M. Mackesy, "The MLA International Bibliography," p. 287-88.

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SERIAL CANCELLATION PROGRAMS IN ACADEMIC LIBRARIES IN MISSOURI

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ABSTRACT

A discussion of programs used in academic libraries in Missouri concerning cancellation of serial titles, and of methods utilized in calcellation procedures. The study included surveying 33 academic libraries with serial collections of 400 or more active titles. A compilation of results of 17 responses proved that few libraries in Missouri rely on written cancellation policies, but many utilize informal, unwritten policies. Librarians make most deselection decisions; faculty are consulted frequently. Recommendations include analysis of indexing, citation frequency, faculty opinion, cost, language, curriculum relatedness and program accreditation requirements. Also recommended are resource sharing consortiums in metropolitan areas.

Many academic libraries are witnessing diminishing budgets coupled with rising costs of library materials. Experiencing especially sharp price increases are those items of a serial nature, such as scholarly journals and various subscription materials. According to Library Journal, serial prices rose approximately 12.6% annually between 1975 and 1980.[1] As a result of these inflationary prices, many academic libraries are making an effort to curtail spending by cancelling subscriptions, hopefully without damage to the serial collection of the library. Since this is a relatively new problem, librarians need to be aware of methods used to cancel items which may not be crucial to the library collection, and methods which have the least effect on the library's users.

Because of the enormous differences between libraries sharing this problem, it would be impossible to determine the "best" method of serial deselection, and this paper will not attempt to do so. Instead, the purpose of this study is to determine the various methods used in deselecting serials. It is hoped that from these results librarians can then judge for themselves which method might work most efficiently. Another objective of this study is to determine what types of materials are being cancelled (such as foreign publications, duplicates, or items in a particular subject area), and to determine, if possible, the overall effect cancellations have on a library collection.

This is a topic of relevance not only to serial librarians, but to all librarians. Although this study applies specifically to academic librarians in the State of Missouri, the implications are of interest to any librarian facing economic changes and inflationary prices.

LITERATURE SURVEY

During the 1970s, many libraries began deselection programs. Several of these programs have been documented in library literature in the form of articles and proceedings of conferences.

A review of the literature indicates that every academic library which practices deselection approaches the problem in a unique way. The most efficient and objective programs are highly systematic, and studies are undertaken which utilize collected data based on several of the following factors:

1. Usage -- the number of times a title is used in any prescribed period of time.
2. Curriculum relatedness -- the need for a title as it relates to courses offered at the institution.
3. Price.
4. Accreditation of an institutional program -- the library may be required to subscribe to a particular title or titles in order for a program to establish or maintain accreditation.
5. Language -- the language of the periodical may be one which is read by very few students, in which case the library must decide if use justifies the cost of the item.
6. Citation frequency -- do authors of papers

cite items from a certain title, thereby proving the journal useful as a research tool?

7. Indexing and abstracting -- the journal is indexed by major indexing and abstracting tools in the subject area in question.
8. Availability in other libraries -- is the journal available through inter-library loan or is the holding institution responsible for owning the title due to network commitments?
9. Integrity of the collection -- librarians and faculty may feel the title is essential to the collection regardless of cost and use.
10. Faculty opinion -- regarding utility, cost, and general value of a title.[2]

Basing decisions entirely on use or price can cause repercussions such as those heard by librarians at California State University at Los Angeles. At CSULA, cancellations were determined through use studies which faculty members later discounted.[3] Use studies alone are not enough proof of a title's value. Faculty ranking of titles proved to be problematic also. At the University of Redlands, a small liberal arts college, faculty members did not list the recommended number of titles for possible cancellation and others participated in collusion by placing different titles on each list.[4] In short, consideration of one factor only is not sufficient for decision making purposes.

A successful deselection program was carried out by the Northeastern Ohio Major Academic Libraries (NEOMAL) consortium. Librarians were able to pool resources and determine which titles each of the six libraries owned. Cancellations were then handled by the consortium serials committee. In this way, seldom used titles were retained by only one library and the others were allowed to drop subscriptions. The cooperating libraries saved $47,500 in subscription costs during the first two years.[5] At the University of Illinois at Urbana-Champaign, extensive cancellations occurred in 1975. Librarians were notified that they needed to cut 25% of total serial expenditures. Librarians in charge of subject collections were given lists of titles in their subject areas. In order to cut those titles which were the least beneficial to the collection, librarians based their decisions on several factors. Duplicates were a primary target unless they were heavily used titles. Use was determined by using circulation statistics of bound volumes. Many librarians consulted with teaching faculty if their subject collection was small enough. Large collections which were less manageable made it difficult for librarians to consult faculty at every turn, placing final decisions with the librarians. Indexes were used by subject librarians and titles were retained if they were indexed. The study did not include special treatment of new titles which may not have been indexed. Another tool which proved to be useful was the library's Acquisition Policy Statement. This document included titles which had to be retained for curriculum requirements. When this cancellation project was finished, many librarians involved were pleased with the results and reported few patron complaints. The project cleared the library of unnecessary duplicates and materials, saving $190,435.[6]

A systematic method for deselecting titles is very important to any library starting a cancellation project. However, certain methods may become so complex that they require time, money and cooperation which many librarians have found to be lacking. One example of this occurred at the University of California, Dominquez Hills. Numeric values were assigned to each of several factors considered. Journal worth was calculated as the sum total of points. The librarian using this method noted that, although it seemed cumbersome, the method would provide a sound guide for deselection decision making.[7]

By analyzing the literature related to serial cancellation projects, it is apparent that every library handles deselection in its own fashion. Each library has unique considerations which depend on organizational structure, policies and budget.

METHODOLOGY

Serial title review and deselection is practiced in some form in nearly all libraries. To facilitate this study, a sample group was required which would include libraries with similar problems as well as similar goals, specifically, the problems and goals concerning serial publications. Academic libraries commonly subscribe to larger numbers of serials than school and public libraries, mainly because of the research needs of academic library users. Since academic libraries subscribe to more serial titles than other types of libraries, it is logical that they also spend larger portions of their budget on serials. It is also probable that academic libraries spend more money per title than other kinds of libraries (excluding certain special and medical libraries) because of the cost of research oriented materials to which they subscribe. Foreign language materials and technical journals are more costly than the generally popular titles purchased by public libraries. By considering these probabilities, it was decided that academic libraries would provide the best sample group for this study because they spend more on serials and own more serials than other types of libraries.

To keep the size of this study manageable, the choice for participants was limited not only to academic libraries, but to those which were located in Missouri. This group provided diversity since it included both large and small libraries throughout the state, providing the library subscribed to at least 400 or more active titles. Included in this group were the University and its branches, five state universities and three private universities. Private and state colleges made up the remainder of the sample group. Surveys requesting information on serial cancellation policies and procedures were mailed in November, 1980. A total of 33 surveys were mailed.

Library statistics concerning collection size were gathered from the yearly Directory of Missouri Libraries. By comparing statistics in the Directory from 1975/76 to 1978/79, it was possible to determine the growth or shrinkage of a library's periodical collection. The libraries being studied were categorized into three groups:

Group A -- those libraries whose collection had dwindled and had apparently practiced deselection;

Group B -- those libraries which had little fluctuation in the number of active titles but which might have practiced deselection;

Group C -- those libraries which had increased their active titles and had probably not practiced deselection.

These groups were used in compiling the results of the survey.

The survey consisted of five questions, two of which had several parts. Participants were encouraged to write more extensively if they chose to do so. (See Appendixes A, B and C.) To determine the extent of cancellation programs practiced in the sample group, a question concerning formally documented policies headed the questionnaire. It was assumed that a formal, written policy indicated recognition of the problem. This assumption did not preclude the possibility that libraries without written policies were also cognizant of the problem.

Participants without formally documented policies were next asked to answer a series of questions concerning their informal policies. In this area, respondents were instructed to describe their library's process of deselection indicating who made decisions, what procedures, if any, were followed, and on what evidence decisions were based.

The third area of the questionnaire was designed to reveal what types of materials were cancelled and if different types of materials were treated in different fashions. The final portion of the questionnaire asked respondents to assess the effects of serial deselection on the collection and services of their library. This was a subjective question, unlike the first four, and results of this question may be biased. None of the respondents were asked to identify themselves, keeping their answers confidential. Participants were given one month to complete the questionnaire and return it.

FINDINGS

The survey used in this study was mailed to 33 libraries, 17 of which responded, resulting in a 57% return. To accurately reflect the results of the survey, it will be necessary to analyze each question separately. Remarks from participants will be included within each question's analysis.

As stated earlier, the survey opened with a question concerning serial cancellation policies. Of the 17 respondents, nine answered affirmatively (53%). Table 1 indicates that those academic libraries responding to the survey are beginning to recognize and formalize policies relating to the process of identifying those titles which are likely candidates for cancellation.

The next portion of the survey was designed to determine what procedures were followed by libraries without formal policies, and to determine what evidence and persons were involved in decision making. Answers came in descriptive form and cannot be broken into specific categories. Question three contained four parts which will be discussed simultaneously. (See Appendixes A, B and C.)

Nearly all of the respondents indicated that cancellation procedures began in the library with librarians making initial decisions. In some cases, librarians formed committees to review titles as subscription renewal time approached. At seven of the institutions, faculty were involved in the first phases of deselection. Only one institution reported that faculty had complete control of the

TABLE I. TYPES OF DESELECTION POLICIES

GROUP	No. Sent	No. Returned	Formal Policy	Informal Policy	No Policy
A	11	4	0	2	2
B	18	10	1	6	3
C	4	3	0	1	2
TOTAL	33	17	1	9	7

deselection process. The type of librarian responsible for deselection varied and included several reference and subject librarians, two serial librarians and one library director. Students were involved in deselection indirectly or not at all. Only one library reported having a deselection committee which included members of the student body. Several libraries posted signs indicating that a title might be cancelled. The most common method of deselection began when the librarian reviewed titles and attempted to identify candidates for cancellation. It is evident that perceived lack of use is the most common way of choosing deselection candidates. Although a few libraries reported systematic methods which were used to determine usage, most reported that usage was determined subjectively by the librarian, and sometimes by a faculty member in whose subject area the item was included. Not surprisingly, libraries which had informal (undocumented) deselection policies were able to describe their criteria for cancelling titles more thoroughly than libraries having no policy at all. Systematic usage studies, or determination of use in any way, was the prime reason for retaining or cancelling titles. Nearly every respondent listed usage, or lack of usage, as the major factor when considering possible cancellations. Other factors mentioned repeatedly as evidence supporting cancellation included, in order of frequency, high cost and/or lack of indexing, little relevance to the institution's curriculum, availability in other local libraries, and language of the item. Most libraries having some kind of deselection policy based their decisions on many factors, often including some or all of those listed above. Libraries without any policies too frequently based this decision entirely on use or cost.

At this point, it is necessary to define usage studies as they apply to this investigation. Respondents used this phrase to indicate that their decisions were sometimes based on the amount of use a particular title received. As stated earlier, this use was often perceived rather than systematically determined. While some libraries may be small enough to estimate the amount of use a title receives, librarians managing larger collections are not able to accurately estimate usage without more systematic and objective measures. Since serials often do not circulate, it is difficult to know how much they are actually used. Respondents to this study had a variety of ways to determine use. Although the majority rely on perceived use, one library developed a cost/use formula wherein titles circulated or used in-house less than five times per year became candidates for cancellation. Usage data was based on circulation records in this case. Another library which had closed journal stacks determined the use of a title by keeping statistics on request for each particular title. With this method, the library was able to maintain statistics on all but current issues of any title. It should be noted that both of these methods were used in libraries with informal deselection policies. It is probable that both have practiced deselection. However, since most libraries are not equipped with closed journal stacks and many do not allow unbound issues to circulate, it is difficult to measure usage. Other factors (indexing, local availability, curriculum, language) need consideration in order to make sound deselection decisions. Approximately half of the respondents indicated consideration of factors other than cost and use, with most citing lack of indexing in major indexing tools, and many citing lack of relevance to the curriculum.

The fourth area of the survey was designed to reveal what types of material were chosen for deselection, such as items in a particular subject area, published in a foreign language or of a popular nature. Respondents indicated that popular periodicals readily available elsewhere, or highly specialized, costly journals were the first items to be considered for cancellation. Several respondents stated that particular types of materials were given no special consideration or treatment, indicating that every item was subject to the same analysis. Although some libraries reported giving priority to particular subject areas and specialities, the majority seem to cancel low use, ephemeral and popular titles regardless of the subject area they represent. This might be regarded as a healthy sign, assuring users that items in one subject area are not being arbitrarily cancelled.

The final portion of the survey was a subjective question asking librarians to assess the effect of deselection on their library's collection and services. Although this question does not provide concrete evidence, it gives an indication of the feelings among librarians who have practiced deselection. Five of the respondents felt that cancellations have had a positive effect on collection and services. Comments implied that "deadwood" was being replaced by useful titles and that faculty have since been careful in choosing new titles. Six librarians remained neutral concerning cancellations, and six were unable to determine the effects of cancellations. Many of those who reported the effects as neutral, or did not know the effects, have only cancelled recently or have cancelled very little. Several commented that they were now more cautious when ordering new titles and attempted to cancel only those titles owned by a neighboring library. The most encouraging evidence was the lack of negative response. No librarians reported negative effects resulting from deselection.

CONCLUSION

The primary objective of this study was to identify the methods of deselection used in Missouri's academic libraries and to determine who was responsible for making cancellation decisions. The overall goal was to determine how widespread serial cancellation programs have become and to estimate the effects these programs have had on the library community.

The results of this study indicate that 60% of the respondents have a formal or informal deselection policy and the remaining 40% without policies practice deselection infrequently. Only one library reported having a formal policy. Forty-one percent of the libraries reported that faculty have some input in the deselection process and nearly all reported that librarians initiate cancellations. Eighty-two percent of the respondents based part of their cancellation decisions on usage, and some on usage alone. Other factors these librarians listed as points to consider when cancelling serial titles included cost, lack of indexing, relevance to their institution's curriculum, availability in other libraries, and language. Types of material which were cancelled most readily were popular magazines and highly specialized and costly journals. Most librarians reported that no preferential treatment was given to particular bodies of material. Thirty percent of the librarians felt that deselection had a positive effect on their collection and services, 35% remained neutral and 35% were unable to make any evaluation. No librarians noticed negative effects from cancellations.

These statistics illuminate the problem of serial deselection in academic libraries in Missouri. Major steps are being taken by many librarians to make deselection as efficient and painless as possible. Others are only beginning new deselection programs. By developing systematic methods to determine the value of a title, librarians will be able to make sound decisions without damaging collections or services. These systematic methods should include consideration of relevance to the institution's curriculum, where the title is indexed, how much the title costs in relation to use and how much use the title receives. Faculty members should be consulted also as they are able to measure the needs of their departments best. By combining systematic methods and faculty input, the librarian will be able to approach deselection rationally and regularly.

LIMITATIONS OF THIS STUDY; IMPLICATION FOR FURTHER RESEARCH

It is doubtful that there is one method of serial cancellation which would work efficiently in all of the libraries included in this study. This research was not designed to accomplish that task. This study reveals, however, that there are numerous methods of approaching cancellation, even if some are less than scientific. The most important findings reveal an awareness among participants that deselection decisions are becoming a regular function of serials librarians and subject librarians.

This study does not attempt to reveal the cancellation procedures which occur within each participating library, but it does reveal the current status of cancellation activities in academic libraries throughout the State of Missouri. Research into the individual libraries' programs would reveal more specifically how librarians cope with decision making, faculty input and selection of materials to be cancelled. The University of Missouri libraries would provide an excellent subject for such an undertaking because of the extensive collection and large budget involved.

A possible continuation of this research would be in the study of consortium or network activities in the state. Resource sharing between metropolitan colleges and universities would greatly ease the financial strain placed on those institutions. Development of serial sharing networks such as those initiated by NEOMAL could save participating members thousands of dollars.[8]

This research indicates a need for formally documented deselection policies, particularly for libraries with large serial collections and sizable budgets. Many libraries have selection policies and should consider developing deselection policies as well. Libraries run the risk of haphazard and painful decision making if deselection is approached without guidelines and preparation.

The results of this study only touch the surface of cancellation projects practiced within the State of Missouri. It was designed to do only that, but with the hope that librarians will find it a stimulus for development of sound deselection practices and for furthering research into efficient ways of handling deselection.

Appendix A

1. In reviewing your library's annual statistics for the past four years, it appears that your serials collection has decreased in size. Does your library have any type of policy concerning serial cancellation?

___ yes ___ no

2. If you answered yes to the above question, is that policy formally documented?

___ yes ___ no

3. If you do not have a formal policy, please respond to the following questions:

   a. What procedures does your library use for cancellations? Please explain.

   b. On what evidence do you base cancellation decisions?

   c. What people are responsible for making deselection decisions?

   d. Are other persons involved in making these decisions? If yes, in what capacity?

4. a. Is there a particular type of material which is chosen for cancellation?

   b. Are different types of materials treated in a different way?

5. Has the effect of these cancellations on the collection and services been:

a. positive __________
b. negative __________
c. neutral __________
d. don't know ________

Explain:

Please return by December 10.

Appendix B

1. In reviewing your library's annual statistics, it appears that your serials collection has remained approximately the same size during the past four years. Has your library developed any type of cancellations policy?

___ yes ___ no

2. If you answered yes to the above question, is that policy formally documented?

___ yes ___ no

3. If you do not have a formal policy, please respond to the following questions:

   a. What procedure does your library use for cancellations? Please explain.

   b. On what evidence do you base cancellation decisions?

   c. What people are responsible for making deselection decisions?

   d. Are other persons involved in making these decisions? If yes, in what capacity?

4. a. Is there a particular type of material which is chosen for cancellation?

   b. Are different types of materials treated in a different way?

5. Has the effect of these cancellations on the collection and services been:

a. positive __________
b. negative __________
c. neutral __________
d. don't know ________

Explain:

Please return by December 10.

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A SERIALS DESELECTION METHOD

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ABSTRACT

In planning for an anticipated reduction to our periodicals budget, we relied on the judgement of both the academic departments and the librarians. Departments nominated periodicals to be discontinued from a list of periodicals in their subject area. The serials section computed a score for each library and general periodical. Rankings resulted from these scores. The Serials Review Group reviewed the rebuttals submitted by the staff to periodicals appearing on these rankings that they did not wish discontinued. Lists of all items proposed for reduction, submitted by both the departments and the library, were circulated for review.

Serials librarians don't like to discontinue subscriptions. Often, however, it is something we are forced to do for one of two reasons: the lack of money available to purchase new library materials and the ever increasing portion of the budget taken up by serials to keep existing subscriptions in effect.

I am convinced that there is no good way to reduce serials. What I will describe is what we have been doing at Kearney State this year in an effort to make as good a decision as possible on periodical titles we may be forced to eliminate.

Kearney State College's Calvin T. Ryan Library built up its periodical collection to well over 2000 title by 1975. Until then, the monograph budget had exceeded the serials budget. In 1976-77, the serials budget pulled ahead of the monograph budget and has consistently remained in this position since then. For the current budget year our library budget is divided nearly two-thirds (65.5%) serials to one-third books. Having to reduce periodicals was not a new experience for me, as in the 1979 and 1980 budget years we had discontinued some 391 subscriptions, in an effort to stay within the budget guidelines we had been assigned.

Right now we carry 1871 periodical titles. 1702 of these fall within subject areas that are directly related to one or more of the academic departments at Kearney State. Departments use these titles for course work they assign, faculty have a particular interest in them and oftentimes a particular faculty member has ordered the periodical for the library with the approval of the department head concerned.

The remaining 169 periodicals are general interest periodicals or are on library oriented subjects and subscribed to because they are periodicals that are: indexed by Reader's Guide to Periodical Literature, an index that we try to hold most of the titles in: that librarians know students use heavily; that support the Educational Media program or are titles used by librarians to keep current.

During the 1981 budget year we did not reduce the number of subscriptions. It became obvious to us in July, 1981, as we started the new budget year, in view of the ominous rumblings that were emanating from Lincoln, that we would not get a favorable budget for the 1982-83 budget year and that we would have to reduce the number of periodicals that would go into effect at the start of calendar year 1983. We arrived at this conclusion after seeing the steady increase in the cost of periodicals and realized that our ever increasing serials budget was allowing our library to buy fewer and fewer books. As a result, our growth rate was closer to 2% than the 5% standard.

Our first step was to hold the number of new subscriptions to a minimum. We did this by informing the faculty that for each new subscription they wished to begin, they must cancel an equivalent dollar amount of an existing subscription. This has worked fairly well in keeping the number of new subscriptions to a minimum.

Procedure

When we discussed our fears with the administration of the college, we were told that they did not foresee having to reduce our budget. They further told us that in an event that this had to be done, we should plan on a 5% and a 10% reduction as well as the 13.7% reduction. (13.7% was the amount we predicted inflation would be). This meant that we needed to plan for three possibilities: a 5%, 10% and 13.7% reduction.

Although calendar year 1983 seemed like a long way off, there were two reasons for us to act quickly. In order to get the best break on the service charge that we pay our vendor, we prepay our subscriptions by July 15th of the year preceeding the date they start. Also, faculty generally are not available for consultation on library matters during the summer months. Practically, this meant that we needed to finish our planning by May 6th, the last day of this semester.

Several related problems compounded the headache. Faculty are very touchy when periodical subscriptions they order are discontinued. Also, accreditation requirements exist that specify that the library must carry certain periodical titles in order for the department to be accredited. Also, many faculty members receive grants to do research because the library has current and past subscriptions which will support their efforts. Also, reference librarians are oftentimes more aware than the faculty of general periodicals that students use to fulfill general assignments such as English papers and speeches. These are normally arrived at through Reader's Guide citations. Thus it probably would always be necessary for the library to continue to subscribe to certain titles which librarians recognized as being heavily used that, in the department's opinion, had little value.

Our approach to the problem was to involve as many people as possible in the decision. We felt that in the earlier reductions not enough communication had gone on concerning the titles we were proposing to reduce. This had meant that we were continually justifying why titles were discontinued to faculty members who always seemed to just be discovering this fact.

To begin the process we sent a letter on January 8th to each department. It asked that the departments nominate titles for the planned reduction. With the letter, we included a list of periodicals falling within that department's subject area. On the list we pencilled in the latest price of each periodical and placed a total at the bottom of the list. We then computed 5%, 10% and 13.7% of this total and placed these figures on the list. These represented the targets that each department would adjust to. The departments were asked to respond by the 15th of February.

We felt that the timing of the correspondence was critical as we wanted the departments' responses back in time to analyze them and to diplomatically prod those who were delinquent in submitting them.

What we then planned to do was to prepare a consolidated list of all the periodicals that the departments and the library nominated and circulate this list to all concerned. This would, we hoped, afford other departments an opportunity to rebut periodicals that another department had recommended be discontinued.

Related problems

This communication process was necessary as we realized that assigning periodicals to a department is a debatable process. To illustrate, the Psychology Department orders the periodical Psychobiology, then at some later time decides that because of budgetary pressures it should be eliminated. Meanwhile the Biology Department discovers the periodical, begins using it in their course work, and really objects when Psychology plans to discontinue it.

Another inherent problem in the whole reduction process is that whatever you decide to reduce, you will offend somebody. Each periodical seems to have its own champion and even librarians can be offended when one suggests that their favorite reading fare is not suitable for the shelves. Faculty members, I suspect, often regard the subscription by the library to periodicals they are interested in as a "fringe benefit" that was an implicit part of the agreement arrived at when the institution hired them.

The whole problem of objectivity and personal interests becomes further complicated when one begins to try to decide which periodical has less value, one that one reads and consults frequently or one in a subject area that one is less interested in.

Even closer to home, serials librarians hate to cut subscriptions. You feel that you were hired to manage a serials collection of a given size and in reducing the size of the serials collection you bring up the painful question of the necessity of retaining your job. But away from paranoia, the greatest reason that the serials librarian hates to cut periodicals is that no matter how the decision is spread out, one realizes that sooner or later you, the serials librarian, will be asked, "Why did you decide to cut my favorite periodical." Somehow this question always seems to come when your memory is at its worst and usually, to be truthful, you can't even remember whether the library ever subscribed to the title, much less whether you decided to discontinue it. It is like a hand grenade that has been lost in a field you walk in. You know that sooner or later you will step on it.

A related problem which comes up in discussing items to discontinue is the role of academic libraries in procuring material purely for the enjoyment reading of patrons. To illustrate, in the budget cut of two years ago we decided to discontinue Playboy. We felt that this was a logical choice as in deleting this periodical we not only eliminated a costly periodical which - as we saw it - would have little impact on the curriculum, but it was a publication that caused a big circulation problem. As a matter of fact, the only way we could even partially keep it was to place it on reserve. Supporters of Playboy argue that Playboy has serious articles which often appear amongst the centerfolds. For example, Playboy's study of presidential assasinations is considered to be unequalled and we teach a course on this topic at Kearney State. Some would say that by discontinuing Playboy, the serials librarian singlehandedly and with malice prevented the serious reader from access to these illuminating and revealing educational items.

Yet another aspect is the periodicals a college library should carry to support very general type courses. These courses are designed to develop communications skills and generally leave it up to the student to choose what he or she wants to write or speak about. The number of periodicals which could logically support this kind of course are endless. We have made the decision to try to carry materials indexed in Reader's Guide as we know that students use this material constantly. Oftentimes, departments don't recognize that this type of literature is as important as it is to the student.

Serials Review Group

With all these variables, we realized that we needed a review process, no matter what procedure was used. Fortunately, earlier in the year a Serials Review Group had been organized. Its purpose was to review new titles to be ordered, to review those to be discontinued and to involve the two reference librarians more in serials decisions, as they are the librarians that are in closest contact with our users.

The Serials Review Group is made up of four members, the two reference librarians, the Director of Technical Services and myself. I convene the meetings which are held at least on a monthly basis and report on the meetings to the Director of the Library. This group acted as a forum for reviewing the rebuttals submitted by the staff to the general and library oriented periodicals which were deselected as a result of the scoring exercise I shall describe, helped formulate the procedures which we followed, and in one case actually selected the items for a department that left the decision of which periodicals they would discontinue up to the library.

Scoring

In starting our process we searched Library Literature for a model to follow. The information we came up with was not extensive.[1] California State University at Domingues Hills had scored their journals and we decided to modify and adopt their procedures to fit our situation.

Scoring takes a lot of time, and it was impractical to consider scoring all of our journals. What we decided to do was to score only the library oriented journals and periodicals of a general nature. We had 169 of these. Most of them were periodicals, but some were indexes and services. In scoring them we used three factors: subscription price, indexes and abstracts that carried the periodical and the judgement of the library staff.

For the scoring, the serials department assigned 25% of the score for each periodical title based on the subscription price. This appeared to be a simple matter. We would just use the price quoted for each periodical as listed in the annual article appearing in Library Journal, the last by Norman B. Brown and Jan Phillips entitled, "Price indexes for 1981." It normally appears in the July issue.

The first problem became apparent at this stage. Indexes and abstracts were included in the 169, and since the cost of these was far greater than the average cost of a periodical we had to use two scales for assigning points based on price. For periodicals, those having an annual price of under $40 were given maximum credit or the full 25% while those with a subscription price of over $80 were given no points for this portion of their score. For indexes and abstracts, those with a $600 or below price were given full credit with those over $1000 being given no credit. Again, we needed to use two scales for price because of the wide variation between the average price of a periodical, $39.13, and that of a Wilson index, $600.58.

The reference department assigned the points for the second factor, index coverage. It also counted 25% of the total score that each periodical received. These points were assigned based on the inclusion or exclusion of the periodical in either of the two indexes which we felt best covered this general and library oriented literature, Reader's Guide to Periodical Literature and Library Literature.

For indexes themselves, we used the recommendation that they be included in an academic library's holdings as stated in any one of three reference sources: Evan Ira Farber's, Classified list of periodicals for the College Library, Eugene Sheehy's, Guide to reference books, or A. J. Walford's, Concise guide to reference materials. Indexes which were not favorably mentioned or omitted by these sources received a 0 score while those recommended by any one of the three earned the full 25%. The reference department determined this and furnished serials with this portion of the score.

Thus 50% of each serial's score came from the serials and reference department input. The remaining 50% came from the average of the score that each librarian assigned each periodical based on their judgement of the worth of each periodical to the College's curriculum. Each librarian assigned a score to those of the 169 general and library oriented periodicals that they were familiar with. In the event they omitted scoring a periodical for some reason, they were not included in the averaging done for that periodical. We computed the average[2] score that the librarians assigned each periodical and this was worth the other 50% of the score.

This combined with the scores assigned by serials and reference became the periodical's score.

After the periodicals were scored they were arranged in ranked order from lowest score to highest score. The easiest way to do this was to first write down the titles and scores of all those falling in the 20-30 range, then rank these titles working from the lowest and then proceed to the 30-40 range and do the same thing. We added to our ranking list a cumulative price total. This was useful as in preparing periodical lists for potential reduction, you never know whether you will be given a percentage amount or a dollar amount to adjust to.

Next we circulated the list of periodicals that the scores showed were candidates for elimination to the professional staff for comment. The accompanying instructions asked them to forward any rebuttals they had to eliminating the periodicals on the list to the Serials Review Group. The Group received rebuttals to five of the periodicals on the list.[3] The Group accepted all of the rebuttals with the exception of one[4] and removed the remaining four from the list of titles we were considering eliminating. Accepting these four rebuttals meant that we had to go into the ranking list further to get replacement periodicals of an equivalent monetary value to the four we had removed. The Serials Review Group made these judgements, but the rankings and the cumulative price totals made the mechanical action quite painless. As we went further into the list, we found that we needed to pay close attention to the impact that the deletion of a title would have on our ability to provide the level of service that we had in the past. The periodicals on the final list we decided on ranged in score from a low of 25 to a high of 81.5.

Departmental Periodicals

With the library and general periodicals scored, we felt as though the bulk of the work was over. Our smugness evaporated when we received the departmental nominations. The departments complied with our instructions and cut the periodicals on their subject lists by 5%, 10% and 13.7% as we had requested. We had anticipated that departments would drop periodicals that other departments needed, but we had no idea of the extent that this would be done.

To allow for the overlap between departments and for one department dropping a periodical depended upon by another department, we circulated a list to all departments indicating the periodicals that each department had nominated for elimination. What we had not anticipated was that departments would nominate periodicals from their list of titles to be dropped which seemed to us to be essential to the operation of the library. For example, our Nursing Department said that we could discontinue Lancet and the New England Journal of Medicine. They reasoned that they did not want their students using these purely medical journals for nursing research. Since librarians could not agree with depriving the nursing students, pre-medical students, physical therapy students, anatomy students and the general library patrons of subscriptions like these which we knew were heavily used and depended upon, we could not agree to these subscriptions being discontinued. We hoped that when we circulated the lists, departments would ask for obvious titles such as the two mentioned above to be transferred to their lists. If they didn't do this, we realized that we would need to place them on the library list. To insure that no titles that the library should have were discontinued, we planned for the Serials Review Group to review the final list after the departments had returned them.

The department rebuttals are due back today, the 15th of April. We are also considering meeting with department heads that have nominated titles that we feel should be retained.

Timing of a process like this is critical as a large part of the faculty is not available during the summer months. We anticipated that the process would take an entire semester. The letter we sent out asking departments for deselection nominations was dated on the 15th of February. We actually had heard from all of the departments by the 5th of March. All the lists from the departments were consolidated with the library list and this master list was circulated to all departments on the 13th of March. Departments were asked to circulate this list to their faculty and to inform us of any rebuttals by the 15th of April. This gave us about three weeks before the end of the semester. Our instructions indicated that no response would be taken to mean that the department concurred with the list of titles to be discontinued. If a department objected to a title that another department nominated, they were asked to state why they objected and whether or not they would agree to put the title on their list, replacing one of equivalent dollar value which then could be discontinued.

This is the procedure we have been carrying out this semester. There probably are refinements and improvements which could be made to it. I am tempted to say that Vietnam was my only previous experience in waging an unpopular war. I am not saying that the method just described is the perfect method, but it is a method and it is the one we came up with, for better or worse. Certainly the politics of reducing serials needs to be watched very carefully. Having done this twice now, I am in favor of involving as many people as possible in the decision. In a year when the scoring has all but vanished from the memory of the serials librarian, and the irate faculty member just discovers that the favorite and indispensable journal that he or she allegedly consults on a daily basis has been cancelled, hopefully the serials librarian will recall that a number of people were involved in the decision. Although this won't make the faculty member any happier, it may at least serve to blunt the attack.

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1. Jeffrey Braude, "Journal deselection in an academic environment: a comparison of faculty and librarian choices," *Serials Librarian*, V. 3 (2) (Winter 1978), 147. Also helpful is a bibliography compiled by Tom D. Kilton entitled, "The rising cost of serials: practical methods for coping." Came from a program put on by RTSD and ACRL in New York, June 30th, 1980.

2. We also considered using the median and the mode.

3. *Denver Post*, *The Chicago Tribune*, *St. Louis Post Dispatch*, *Library Systems Newsletter* and *New Serials Titles*.

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RETROSPECTIVE CONVERSION: SOME ASPECTS AND APPROACHES TO BUILDING A FUNCTIONAL DATABASE OF MACHINE-READABLE RECORDS

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ABSTRACT

This paper addresses the historical reasons for retrospective conversion, current reasons for beginning a project, and methodology for developing one. Major reasons previously were reclassification of a collection and integration of split collections into a single catalog. Major reasons for conversion currently are to create a machine-readable format for an automated circulation system, to upgrade inventory control, and to replace deteriorating card files with a COM catalog. Several approaches to developing a Retrospective Conversion Project will be considered, including shelflist conversion, currently circulated materials, and an inventory approach. The aspects of past cataloging practice that will be retained and/or updated in the future are explained as they relate to the project.

Retrospective conversion is the process of converting hard copy catalog records to machine-readable form, for the purpose of improving access to the library resources.[1] This process has evolved from manual correction and revision of catalog cards manually to the present day building of machine-readable files for an on-line catalog. In the past some libraries considered reclassification of a collection and integration of branch collections into a single catalog as major reasons for investing in a retrospective project. For the most part these retrospective projects were not automated and required a large investment in additional clerical and professional library staff. Most libraries undertook these projects while maintaining their daily level of cataloging processing. This was the practice when reclassification projects were inaugurated at University of Utah and University of Maryland libraries.

Early Projects

On September 1, 1966, the Marriott Library at the University of Utah decided not to have a massive reclassification effort of the entire collection, but to institute a gradual change. Reclassification occurred when ever an added copy of a title classed in Dewey was received (this included multi-volume sets and serials), whenever their treatment of a monographic series differed from the Library of Congress treatment, and whenever a title classed in Dewey came into the Cataloging Department for any reason. Every volume leaving the Cataloging Department had to be classed in the Library of Congress classification (excepting titles for the Juvenile and Curriculum Collections).[2] In May, 1970, when the "Procedures for Reclassification in Library of Congress Classification" were again revised at the Marriott Library. A major objective of the project was restated: "The reclassified library materials should not remain in the Cataloging area more than two working days. All reclassified materials must be sent to stacks for shelving before 5 p.m. on Friday. No cataloger should attempt to reclassify a book on Friday unless she thinks she can finish it before 5 p.m. the same day".[3]

In the Spring of 1961, the staff of the University of Maryland Library began to study the feasibility of reclassification. At that time, the library had 307,068 volumes and was adding an average of 20,000 volumes per year. The library had used Library of Congress cards for 60 to 70 percent of new titles. The cataloging practice was to follow Library of Congress entry and subject headings. Because of its length, the Dewey Classification was a confusing notation for the more specialized material. In July, 1963, the Cataloging Department embarked on the reclassification project. The cataloging staff handled newly acquired materials and the Project Staff was responsible for material already in the collection. An objective of rapid book return to the shelf at the University of Utah was a similar objective for the University of Maryland Library. As stated in their proposal: "We hope to be able to time the operation so that only twenty-four hours will elapse from removal of the book from one location in the stacks and its reshelving in another". Included in this processing period was the xeroxing and completion of headings on the new card set, and the filing of the new cards in the public catalog and discarding of the old set.[4]

The objective of both libraries was to unify their collections under one national classification system. This reclassification project was quite expensive for both institutions. [See Table I] The projected cost for the two year program at University of Maryland was $175,327.00. In the two and one-half years the staff was able to send 51,964 volumes to the stacks under the new classification—one seventh of the collection. [See Table II] These escalating costs, required libraries to re-evaluate the need for reclassification projects and to re-examine how these projects might be financed in the future. As with many other things in life, "Time waits for no man". This includes libraries. In the seventies libraries had to start planning for conversion to machine-readable format of card records. Some of the major reasons were to support automated circulation systems, upgrade inventory control, and replace deteriorating card files with Computer Output Microfilm (COM) catalogs.

Present Projects

Automated circulation systems operate with little or no database. With some automated circulation systems, the database is built as books are checked out. An example of this method was the implementation of CLSI's LIBS 100 Circulation System installed at New York University in November of 1974. The system went on-line in October of 1975. "The LIBS 100 is an 'inventory' system, bibliographic information for circulating books need to be entered only once. The system will retain in its memory data for every book that has circulated. Also, information about different copies of the same title is simply attached to one bibliographic record; author and title data need not be entered anew

Table I

Estimated Cost of 2 Year Reclassification Project at University of Maryland

1st year (798,400 cards)		
Xerox rental	$ 7,286.00	
Supplies	209.01	
Drum replacement	95.00	
Card stock	4,151.68	
Personnel	73,621.00 *	
		$85,362.69
2nd year (813,397 cards)		
Xerox rental	7,417.22	
Supplies	215.26	
Drum replacement	95.00	
Card stock	4,229.68	
Personnel	78,007.00	
		89,964.16
Total cost 2 year period		$175,326.85

* Personnel figures on all charts are based on the original estimate of 22 people for the two year operation.

Source:

Association of Research Libraries. Systems and Procedures Exchange Center. *Reclassification Survey Results, Kit 16* (Washington: The Center, 1975), p. [19].

Table II

University of Maryland

Reclassification Budget

YEAR	AMOUNT	UNIT COST	
		PER TITLE	PER VOLUME
1963/63	31,000	4.59	1.90
1964/65	41,000	4.41	2.02
1965/66	52,700	5.77	1.97
TOTAL	$124,700		

Source:

William E. Connors, "Reclassification at the University of Maryland," Library Resources and Technical Services, 11, no.2 (Spring, 1967), 239-241.

for each different copy". At NYU, the systems librarian developed a method for using OCLC archival tapes to input new records into the LIBS 100. By using this method they were able to reduce the amount of staff time needed for conversion, reduce errors, and allow the library to go on-line faster. This system was able to achieve, through automation, a database of MARC records and a rapid circulation system with an inventory control.[5] Another reason for retrospective conversion is to replace deteriorating card files with a COM catalog.

The COM catalog is a microform catalog that can be generated from machine-readable data such as that recorded on the OCLC archival tapes.[6] Princeton University in 1977 felt COM catalog was the right direction to go after doing cost comparisons. [See Table III] This figure illustrates the estimated costs based on 60,000 new titles per year. The COM catalog was substantially less expensive. Whether a library is considering adopting a COM catalog or an on-line catalog, or any other type of non-card catalog, the library staff has to decide what to retain in the bibliographic record.

The first problem is to identify the essential and nonessential data elements. At the School of Library Science at the University of Southern California, a questionnaire in regard to a COM catalog was distributed to three library science classes. The thirteen elements considered and the rank order of their importance are given in Table IV.

According to the survey, only 7 out of 13 itmes were considered essential to the record. In addition, the call number was regarded as

Table III

Cost Estimates Based on 60,000 New Titles/Year

	Photocomposed book catalogue. 50 Copies-annual plus monthly cumulation	Com fiche catalogue. 50 Copies - annual plus monthly cumulation
1st year	$115,000.00 (1)	$4,300.00 (2)
each additional copy	150.00 (1)	63.00 (2)
5th year	$181,000.00 (1)	$6,955.00 (2)
each additional copy	250.00 (1)	110.00 (2)
additional expenditures	Computer costs Re-education of library clientele	Computer costs Re-education of library clientele Purchase of microform reading equipment ($80.00 for a simple fiche reader to $5,000,00 for a ROM 3). Will require enough readers to avoid queuing problems.

(1) Costs include photocomposition, printing and binding, based on Bell Labs and NYPL data.

(2) Based on data from the Berkeley and UCLA reports.

Table III (continued)

	Cards
1st year each additional copy	$15,120.00 @ $ .045 per card equivalent to current OCLC costs. (3)
5th year each additional copy	$15,120.00
additional expenditures	Staff costs roughly equivalent to 3,360 man-hours of filing time (positions currently staffed at SG3 plus professional time for supervision and training). (4)

(3) Cost does not include charges for using OCLC system, e.g., terminal maintenance, telephone line costs, record use costs, etc.

(4) Does not include card stamping and finishing work.

Source:

Association of Research Libraries. Systems and Procedures Exchange Center. Planning for the Future of the Card Catalog, Kit 46 (Washington: The Center, 1978), p. 36.

Table IV

Elements of Questionnaire and Results

Elements considered for COM	Rank order of importance according to survey
1. Heading: author's name	(1) tied
2. Title proper	(1) tied
3. State of authorship	(8)
4. Edition statement	(3)
5. Imprint statement (as a unit)	(4)
6. Place of publication	(9)
7. Publisher	(5)
8. Date of publication	(2)
9. Collation	(10)
10. Series statement	(11)
11. Notes	(6)
12. ISBN	(12)
13. Tracings	(7)

Source:

Steven Seokho, "A Study of Data Elements for the COM Catalog," *Journal of Library Automation*, 12 (March 1979), p. 95-96.

an indispenable element. Their final conclusion was that including all traditional elements, especially in the machine-readable catalog, would be economically unjustified and functionally ineffective.[7] When the essential elements have been identified, there are several approaches to developing a retrospective conversion project: 1) shelflist, 2) an inventory approach, and 3) currently circulated materials.

A retrospective conversion project based on the shelflist entirely is expensive and time consuming. One is literally recataloging the entire collection, even though some material may be missing from the shelves. An inventory may be in order for those areas of the collection that are most used. If material cannot be located on the shelf and is not checked out, then a decision has to be made whether to order replacement copy or withdraw the item. Such considerations must be decided before starting the retrospective conversion project or it will be necessary to back track for decisions regarding material status. If the project is based on material that is currently checked out, the library will be converting material that really is in the collection.

The circulation department can provide you a list of call numbers with titles or book cards in call number order. The call numbers can be matched against the shelflist, and the shelflist card can be flagged for the project. Once the shelfist is flagged, the shelflist information can be processed by REMARC of Carrollton Press, MINI MARC of Informatics, Inc., Rockville, Maryland, UTLAS of the University of Toronto Library, OCLC, etc. These organizations can usually supply whatever is needed for the project whether the machine converted records are for book catalog, COM catalog or tape. The director of Division of Library Automation of the University of California selected REMARC as the vendor for their retrospective project. Some of the deciding factors were the more than 5 million Library of Congress cataloging records which were not among the 1.5 million records which Library of Congress converted to machine language under the MARC program. Also, the cost of converting using OCLC was $1.76 per record in 1981. The OCLC cost was primarily in terminal operator wages. With REMARC the cost is 50 cents per hit.[8] For those on OCLC it may be more convenient to use present staff for a retrospective project, especially if more funds for staff are not likely.

Some of the historical and current reasons for a retrospective conversion project are given above. "A library had better determine as clearly as possible and before initiating a retrospective conversion project -- what it will do with its machine-readable records, and therefore what the best quality must be. Only than can it work out the most efficient way of achieving the conversion".[9]

For an on-line catalog that is replacing a card catalog, the best quality may mean complete and accurate bibliographic citations for student and faculty with the same access points that the card catalog offers, plus more. Robert Dilly, cataloger at Ramapo College Library of New Jersey, stressed from past experience that to achieve quality there must be a way to monitor the project. First, a procedure manual, which will probably be in draft form most of its life, is essential. This manual will become a teaching tool for the person at the terminal.

At all times the terminal operator must know what constitutes an "acceptable record". Second is training. Using existing staff in the technical services department utilizes persons already familiar with catalog cards. If new employees are hired for the project, they should be given some experience in card filing, since they have to know what a catalog card is before they can successfully convert it into something else. Third is feedback. During the initial training period, the trainee would put all entries into the SAVE file for a second person to revise.[10] This helps to identify procedures which lack clarity and what new problems have developed. Some problems that may develop with current retrospective conversion projects are the Library of Congress flip* of the name authority file which was applied to OCLC Database. There have been many changes in corporate authors in the series entries. If the library has an established Series Authority File (SAF) each series would have to be checked, before the record be updated. The University of Nebraska at Omaha Library has handled many changes in the card catalog with "see" and "see also" references. This approach would not work on-line during the updating process. In the cataloging source field in an OCLC record the decision has to be made, of whose cataloging will be accepted for updating. Only Library of Congress copy? Anyone's cataloging as long as it matches? What about subject headings?

* The flip was OCLC converting its On-Line Union Catalog to AACR2 form using the automated Library of Congress Name-Authority records in January, 1981.

These are questions only individual institutions can resolve. But resolved they must be, before time and money can be funded for a project. The archival or magnetic tape the library develops should include all the bibliographic information wanted now and in the future. There is always the possibility the system being loaded as a database for now may be replaced later by more sophisticated equipment and software.

Before any retrospective project begins, consider the following:

1. Why is the project necessary?
2. What will it do for the library now and later?
3. Who will do the work, and what procedures will be followed?
4. Where will additional funding come from?
5. When will the project begin?

In closing, a quote from Ken Bierman article The Future of Catalogs in North America is fitting: ". . . in terms of the future of automated catalogs, the Wright Brothers have just flown and it will be many years before the supersonic transport catalog is generally available for the majority of libraries. As always appears to be the case, the best is yet to come."

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MICROCOMPUTERS: NEW MARVEL MACHINES FOR TODAY'S LIBRARIES

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ABSTRACT

In the past few years, the computer market has been flooded with small, low-cost, fully functional computers, referred to as microcomputers. How can these new marvel machines be put to use in libraries today, who deal with massive amounts of data and shoe string budgets? This paper is written from a librarian's point of view and explores some of the avenues available such as circulation systems, on-line catalogs, acquisition systems, and reference uses while presenting some of the pros and cons of the microcomputer in today's library environment.

The microcomputer has come of age in the past couple of years. The "micro" merely relates to their size and not their capabilities. A microprocessor is a component in a microcomputer, and is responsible for the fundamental operations of logic and arithmetic. These operations are the basis of all computer intelligence. Microprocessors are small with some being no bigger than an eye of a needle. They can be used in a very wide range of other manufactured equipment, including watches, automobile ignition systems, calculators, microwave ovens, stereos, videotape equipment, TV sets, and toys. They are inexpensive to buy, particularly when purchased in quantity, and require little electrical power to operate.

This paper is an attempt to explain how these new marvels came about, including a brief look at their present capabilities. One needs to keep in mind, though, that microelectronics is a dynamic field with new developments being announced almost monthly. What is presented here may very well be out-of-date by next year. Special attention is given at the end of the paper to current applications of the microcomputer in libraries today.

A BRIEF HISTORY

The electronic computer has developed at a remarkable speed. Table 1 lists the main events in computer history. The ENIAC was the first all-electronic computer and weighed some 30 tons. It contained more than 18,000 vacuum tubes, 70,000 resistors, 10,000 capacitors, and 7,500 relays. It occupied 3,000 cubic feet and consumed about 150 kilowatts of electricity.

The transistor was invented in 1948, and by 1959 had replaced the vacuum tube. The then rapid progress of integrated circuits led to the first microprocessors in the early 1970's. These early microprocessors had a four-bit word size with a bit being a single binary digit. They were useful for watches or pocket calculators, but offered only a limited performance for data processing.

Eight-bit microprocessors appeared in 1974. These were better-suited to character manipulation, but were still not much on computational aspects. Today, a few microcomputers are using a 16-bit processor,

TABLE 1.

Two Thousand Five Hundred Years of Computing

Date	
500 B.C.	Use of pebbles in grooves in a board for counting
200 A.D.	Use of the Abacus in China and Soroban in Japan
1614	Development of logarithms by John Napier
1617	Primitive slide rule (Napier's bones) developed
1642	Blaise Pascall introduces toothed wheels into a mechanical calculator
1812	Babbage's analytical engine designed
1940	Professor Howard Aiken and IBM develop "automatic sequence controlled calculator" using mainly electromechanical parts totalling more than 760,000
1944	ENIAC computer built using over 18,000 thermionic valves and could complete over 5,000 additions per second
late 1950's	STRETCH computer built that could complete two million additions per second (cost several million dollars)
1975	Microprocessor based computer systems able to complete over one million instructions per second at a cost of a few hundred dollars

Source: Booham 1978.

which has considerable more computational power and makes them comparable to some minicomputers.

PRESENT CAPACITIES OF MICROS

Present day microcomputers generally utilize a floppy disk storage. This is a data storage medium which uses a flexible polyester disk. There are two standard sizes, 8" and 5¼". One can store anywhere from 90K (K equals 1,024) to 1 million bytes of information per drive. A byte is normally a group of 6 to 8 bits. The disk drive units along with the necessary software and hardware for interfacing with the microcomputer sell for anywhere between $300 to $15,000.

Memory size is another important aspect of the efficiency of a micro. Memory is the number of "words" that can be stored and addressed directly. A "word" refers to a unit of information manipulated in the computer's basic operations and is usually expressed in bits.

Eight bit processors today have addressable internal memories of several million bytes where just three years ago the maximum that one could obtain was 64K. Clock rates run from 1 to 4 million hertz (million of cycles per second), and are a major factor in determining processing speed of the computer. The 16-bit microprocessors tend to have much larger memories -- up to 512K bytes. Not only are their clock rates higher (around 6 million hertz), but their basic instruction sets are more sophisticated. This closely aligns them with the minicomputer.

The instruction set is the set of basic information processing operations that the Central Processing Unit (CPU) is capable of handling. This set of instructions determines the machine language of the computer.

The larger the computer, the more sophisticated the instruction set and the more powerful the computer becomes. Each generation of microprocessors has a more extensive instruction set than the previous generation. This growth has had a major impact on the speed of operation and the sophistication of today's microcomputer.

The communication of data to and from the computer (referred to as input and output or I/O), and from one computer component to another is done via a set of connectors called a bus. Bus structures vary from computer to computer, but the particular structure chosen determines the interface capability as well as helping to define performance. Most microcomputers have a single data transfer channel while larger machines employ parallel multi-channel input/output. Thus, data transfer tends to be much slower on a micro. This can be an inhibitive factor for overall processing speed and may make it unacceptable for many library and bibliographic processing applications.

SOFTWARE

There are three levels of software found in any computing system: 1. Systems software; 2. Utilities; and 3. Applications programs. The systems software includes the operating system as well as the programming languages themselves. Since most micros are single-user machines, the operating systems tend to be less complex than on a larger machine. The languages available now are becoming more varied. You can choose from FORTRAN, COBOL, PASCAL, FORTH, C, APL, PL/I, and, of course, the ever popular BASIC. The usefulness of a particular language depends not only on the compiler (the interpreter which converts the programming language into machine language), but also on such things as the efficiency of code produced, speed of compilation, and diagnostic aids. This level of performance is often lower with a microcomputer.

Utilities are standard programs to perform frequently needed tasks such as copying a file, or sorting and merging files. Statistical packages often fall into this category. Application programs are written to solve specific problems or perform specific tasks. The possibilities here are far-ranging and include everything from "space invaders" to sophisticated word processing programs. While applications software on a micro is inexpensive compared to a minicomputer or mainframe, it also tends to be of mediocre quality and often poorly documented. Most of this is due to the large potential market and the limited budget of most individual users.

LIBRARY APPLICATIONS

At this point, it is essential that one gains a clear understanding of not only the power of microcomputers, but also their limitations. Some aspects of library work would seem well served by these comparably inexpensive machines. Other areas would demand more sophistication and facilities.

Library applications for computers have largely up to now been limited primarily to the "housekeeping" areas of circulation, cataloging, acquistions, serials control, and some administrative management. The reference area has, of course, been greatly affected by the astronomical growth of online data base services. Many libraries now are also developing their own data base systems for local use. These, though, tend to be much more than a microcomputer can handle.

Microcomputers are beginning to make a show in almost all of the "functional" divisions in libraries. A few of these are well documented and are on the market today, while others are still in the development stage. Described here are some of the applications that are currently being utilized.

Cataloging

An online catalog system on a microcomputer would not be practical for any but very small collections. A typical catalog record would be at least 300 characters or so, and even with a large dual floppy disk system it would only be possible to store a maximum of 1,500 records of this size. (The new 16-bit micros just announced this year have much greater storage capacities).

The MINI-MARC system can be designed to work on some 16-bit microcomputers, such as the Computer Automation LSI-220. It provides full MARC bibliographic records with a data base consisting of 500 floppy disks. These records can be displayed, modified, and stored on another floppy to create a custom catalog. This system of abbreviated catalog records can also be made to interface with some of the current circulation systems such as the CL Systems, Inc. LIBS 100 circulation system.

Micros are also being used to create catalog cards. A Digital Equipment Corporation (DEC, WS-81) word processor was programmed to produce catalog cards for the Energy Economics Group of Arthur D. Little, Inc. This company had a small information center collection (approximately 2,000 books and 140 serial titles) which desperately needed to be indexed and a catalog produced. They decided to lease the DEC, WS-81 since it was specifically designed for text editing and multiple printing.

The program allowed the cataloging elements to be entered in a "list" format. Figure 1 showsthe arrangement of the "list" format and how the fields were specified. The catalog data was entered on the formatted screen. The routine itself allowed the cataloger to input directly at the terminal while indexing journal articles, books, etc. The extra title fields were needed so that each line of the title which fell adjacent to a potential field in the call number fields would be properly indented and not interfere with the call number. The final output in card form is shown in figure 2.

After input, each record is then ready to be printed using the pre-coded format on the size paper indicated, in this case catalog card size. The format instruction uses a Boolean logic statement: i.e., IF (nc) = 4 then process record; or if you wish to only do this week's output, IF (nc) = 4 and (no/yr) = 2/82 then process record. All of the records with 4 in the (nc) field and with the week 2/82 are formed into a document. Once the document is complete, the print command is applied to make 4 copies of each record.

Circulation

An 8-bit micro is a feasible unit for circulation if borrower populations are below 4,000 and total transactions do not go above 22,000. 16-bit micros tend to have larger storage capacities and could possibly handle up to three times more transactions. Still, for most larger scale libraries, this is probably inadequate.

FIGURE 1

Screen Format for Card Production

FIELD NAME*	FIELD	EXAMPLE OF DATA ENTERED IN THE FIELD
call letters	(cl)	TP
call number	(cn)	690
call author	(ca)	U8
call year	(cyr)	
call volume	(cvol)	
author	(author)	U.S.DOE.EIA.
title entry	(title)	Determinants of refinery plant size in the
title entry 1	(title 1)	U.S.
title entry 2	(title 2)	Springfield, Va., Oct., 1978.
title entry 3	(title 3)	60p. (DOE/EIA-0102/45) (AM/EI/78-13)
abstract	(ab)	Oil import program, entitlements, pricing policy, and taxation shown to be significant determininants.
subject headings & tracings	(sh)	1. Refining industry-Economics. 2. Refining industry-construction.
week number & year	(no/yr)	2/82
number of cards	(nc)	4
subject code	(sc)	c

*This column does not appear on the screen.
Source: Moulton 1980.

FIGURE 2

Final Output in Card Form

```
TP                      2/82 4  c
690      U.S.DOE.EIA.
U8         Determinants of refinery plant size in the U.S.
         Springfield, Va., Oct., 1978.

           60p. (DOE/EIA-0102/45) (AM/EI/78-13)


Oil import program, entitlements, pricing policy, and
taxation shown to be significant determinants.



1. Refining industry--Economics  2. Refining industry --
 Construction
```

Source: Moulton 1980

The Oakridge Public Library serves a population of 4,000 and has an annual circulation of 17,000. In June 1979 they received an Ohio Scientific C2-8PDF microcomputer on a lease-purchase agreement, for a total cost of under $3500. They chose this particular micro because of its data base management program. It is a single-user system, using floppy disk storage. It only stores items that are currently checked out at any one time, because the 48K of memory is insufficient to store all of their holdings.

Each item is entered manually into the computer. Even though the manual entry into the computer is actually slower than the previous manual charge system, they feel that this time is balanced out by the other capabilities of the system. Having the computer allows them to immediately identify borrowers with overdue materials when they attempt to check something out. This eliminated the often time-consuming manual search for misfiled transaction cards. They are also able to search for any item currently checked out by any line of its entry: due date, borrower number, author, title, or call number, or any portion of an entry. This allows for quick access to a list of charges for any particular borrower. The computer also automatically compiles overdue lists, which can be printed on an attached printer in minutes. This particular feature is a tremendous time-saver.

Other examples include the Cincinnati Electronics Corporation who has developed a Circulation System using a "micromini". It is a stand alone system and functions much the same as the one at Oakridge. The Nassau County (New York) Public Libraries use a 16-bit micro as a front end interface with a mainframe. The transactions are stored on magnetic tape for batch processing onto the mainframe. CTI Library Systems Division has developed a circulation system on an Apple II Plus. It has 48K of memory and can be expanded to handle four disk drives. Bibliographic data can be stored online, eliminating the need to key in book information each time as in the Oakridge system. Bar codes and light pens can also be added for more efficient read-ins. Otherwise, its capabilities are similiar to the Oakridge system. Table 2 demostrates the cost involved in purchasing an Apple II circulation system.

Acquisitions

Acquisitions records would most likely require a few hundred characters of information, but in contrast to cataloging the number of transactions would be much smaller. So, storage on a small floppy disk seems feasible. In fact, this type of bookkeeping activity favors the use of a computer since automatic lists of accounts to be paid can be produced, and since there tends to be a high volume of input and output. Many of the business accounting programs now being marketed with microcomputers could easily be adapted to some of the library acquisitions functions. This was done with a Radio Shack TRS-80 system at the Glendora (California) Public Library. They use the micro to keep track of book orders.

Reference

Local data based systems are rapidly gaining popularity. REFLES (Reference Librarian Enhancement System) is an online database system originally designed for handling in-house data files on a Radio Shack TRS-80. The system was developed at the University of California, Los

TABLE 2

Apple II Circulation System Cost Sampling

EQUIPMENT*	COST
Apple II Plus 48K microcomputer	$1,530.00
Two Disk Drives with controller	1,300.00
12" Monitor	285.00
Apple Cat Modem	389.00
Epson MX 80 Printer	650.00
Light Pen	600.00
Hardware Total	$4,754.00
Apple Circ System Software	$3,000.00
Apple Circ System Software and Hardware total	$7,754.00

*Information obtained from CTi Library Systems Division, Orem, Utah.

Angeles, Graduate School of Library and Information Science with an intent to capture data which is in need of frequent updating, does not exist in printed sources, and/or is inaccessible. The use of the microcomputer enables the reference librarian to retrieve quickly information pertinent to a patron's question. The system is designed so that each reference department utilizing REFLES may have its own unique data base over which it has complete control. The entire configuration sells for just under $3,000.

The Institute for Scientific Information (ISI) is developing a system called PRIMATE (Personal Retrieval of Information by Microcomputer and Terminal Ensemble) which indexes reprint collections. Each incoming paper, book, report, etc. is assigned a serial number which is filed numerically in the computer, along with the bibliographic description of the item and a set of indexing terms chosen by the user. Retrieval of an item is done bv entering the author's name or any of the indexing terms.

It is also possible to use microcomputers to economize on online literature searching costs, as well as increasing the convenience of searching and improving the quality of the search. Savings of search costs of more than 50% have been reported. Improvements of a micro over a terminal include the following:

(1) automatic log-on

(2) the storage and editing of the search profile prior to transmission

(3) the permanent storage of frequently used search profiles

(4) automatic collection of statistics on systems used and charges incurred.

The automatic log-on would allow the user to transmit his terminal identifier, name and password by depressing only a few keys. The opportunity to store a search and edit it before transmitting at full speed is a valuable way of cutting costs. It allows for slow input and ample time for correction of mistakes without incurring expensive data base costs. The ability to store a search profile locally as opposed to on the host computer is cost efficient only if the profile would be modified frequently. Otherwise, it might be better to store it on the host computer and save telecommunications costs. The collection of statistics for analyzing patterns of use or for checking accounts is another appropriate and sought-after feature.

CONCLUSIONS

New developments in computer technology are no doubt having an impact on today's library, no matter the size. The comparatively low cost of the microcomputer coupled with a high level of performance makes it an attractive possibility for even the smallest of libraries.

It is essential though that one carefully analyze the application of the micro in one's particular situation. If you have a high volume of output requiring the use of a fast printer, or the need to access a million characters of information simultaneously, then a larger and faster machine would be called for. On the other hand, if your number of transactions is small and speed is not a major factor, then possibly a microcomputer is indeed the ticket. The best advice that can be given is to match your need to the available technology.

Micros are continuing to be developed with more and more power and expansion capabilities. At the current rate of development, micros with the power of today's mainframes will probably be available in a few years. These new marvels will have more sophisticated operating systems and user-oriented software which will make them easy to use. We will certainly see them playing a major role in tomorrow's libraries.

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PROBLEMS IN COMPILING A BIOGRAPHICAL DICTIONARY OF THE WARS OF THE ROSES

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ABSTRACT

This paper examines some of the difficulties the author encountered in compiling a biographical dictionary of the Wars of the Roses. Many of the problems involved in working with this subject are not directly applicable to all biographical reference works. Nevertheless, considerations such as scope and arrangement are common to all biographical tools, and those elements that are not can still provide insights into some of the processes and input required in dealing with biographical information.

The reader may be wondering what the Wars of the Roses were. Although this paper is not intended as a history lesson, some background information about the period will be useful. Basically, the Wars of the Roses were a dynastic struggle fought in the latter half of the fifteenth century, between the rival "houses" of York and Lancaster for control of the English government. A later generation of historians dubbed the period "The Wars of the Roses" in the mistaken belief that a white rose and a red rose were the respective symbols of the rival Yorkist and Lancastrian factions. Although a white rose was indeed the badge of the Yorkists, the red rose was, in fact, the badge of the Tudors, whose founder, Henry VII, ascended to the English throne at the end of the Wars of the Roses. Nonetheless, the "Wars of the Roses" is as suitable a term as any to refer to this chaotic period in English history. For those readers whose Shakespeare is not too rusty, "King Henry the Sixth, Part II", "King Henry the Sixth, Part III" and "The Tragedy of Richard III" are all set during the Wars of the Roses.

Why were the Wars of the Roses chosen as a subject for a biographical dictionary? In studying the period, it was found that the tangled family relationships and the numerous titles of nobility of those involved are a source of great confusion. The large number of men in positions of responsibility who were killed during the Wars, and their subsequent replacement, leads to only greater bewilderment. Even the writers of standard works on the period are found to make errors in dealing with it. A need was seen, therefore, for some kind of biographical guide that would assist in eliminating some of the confusion.

The first concern in this or any biographical tool is definition of scope. Several factors are used in determining the scope of the biographical dictionary being discussed. Limiting the topic geographically is one of the prime methods in this regard. An examination of the topic indicates that only events in England and Wales, where most of the conflict occurred, are relevant, while occurrences in Ireland, Scotland, and the continent can be largely excluded.

The dates of coverage are another important criteria. Most historians cite 1455 as the beginning of the Wars of the Roses and there is no reason to change this. The close of the conflict, however, is somewhat more difficult to discern. 1485 is most often viewed as the end of the Wars, but an examination of the facts indicates that 1487 is a more realistic date to use.

Having outlined the topic in terms of location and time period, it is necessary to ask exactly who should be covered. Since the work is intended to cover the Wars of the Roses, this is not too difficult. Coverage is limited to military and political figures, who at that time in history were usually one and the same.

When all is said and done, however, one cannot be too rigid in defining scope. Definition of scope is necessary to outline the general parameters of a work, but should be used only as a guideline. Too many exceptions are found to make a rigid interpretation feasible. For example, Calais, although located on the continent and therefore excluded from the geographic scope of this work, is nonetheless an important scene of conflict during the Wars of the Roses.

A second difficulty encountered is one common to all retrospective biographical tools, i.e. the limitations of historical information. One cannot, for example, call up Richard III and ask him what he was doing on the night of 30 June 1483. Rather, one is reduced to the oft-times frustrating situation of making use of what information has survived, which can be very little indeed.

The length of entry is another area of concern. In this case, entries are quite variable in length. In the first place, there is again the question of the limitations of historical information. Information, afterall, cannot be included if it doesn't exist. Even if adequate information were available, however, it would not make sense to give equal treatment to every individual, as many biographical tools try to do. It would not be an accurate reflection of the facts to give the same coverage to a simple knight as would be given to someone like King Henry VI. As a result of this variable nature of entry length, extra care needs to be taken in order to give as balanced a treatment as is possible under the circumstances. Most of the entries are short, giving names, titles, birth & death dates, and which side(s) they supported, followed by brief biographical information emphasizing military-political events and family relationships.

The arrangement chosen is simply alphabetical by surname except for kings who are listed under their given names. Within the alphabetical organization, entries are arranged chronologically.

Most of the problems encountered in this work involve dealing with various access points. An examination of some examples should give an idea of specific problems. The example below shows one of the reasons why a biographical dictionary of the Wars of the Roses is seen as necessary.

PASTON, JOHN (1421-1466)
PASTON, JOHN (1442-1479)
PASTON, JOHN (d.1503)

The first John Paston listed is the father of the second and third Pastons. The two brothers lived at the same time; giving the same name to offspring was apparently not that uncommon during the Middle Ages. Needless to say, this leads to great difficulty when dealing with the material. When an author or an historical document refers to John Paston, which one is meant? As a way of helping to determine who is being referred to, and as basic biographical information, birth and death dates are included when they can be determined. For example, a reference to a John Paston active in 1484, would indicate that the youngest Paston listed above was the one being discussed.

As has been previously mentioned, most problems concern access points, particularly titles of nobility. Anyone who has studied British history is probably aware of the interchangeability of titles and surnames, resulting in a situation similar to the confusion of names in a Russian novel. An attempt is made,therefore, to provide as many access points as possible in order to aid in the location of a particular person. This necessitates the use of a great number of "see" references. It should be noted that this is very time consuming and realistically possible only because of the relatively small number of entries. The various titles of nobility include lords, viscounts, earls, marquesses, dukes, and kings and queens. The following example shows a listing of the four Earls of Northumberland who lived during the Wars of the Roses:

NORTHUMBERLAND, 2nd EARL OF - See PERCY, HENRY (1394-1455)
NORTHUMBERLAND, 3rd EARL OF - See PERCY, HENRY (1421-1461)
NORTHUMBERLAND, EARL OF - See NEVILLE, JOHN (c.1431-1471)
NORTHUMBERLAND, 4th EARL OF - See PERCY, HENRY (c.1449-1489)

These men are often referred to merely by their title, "Earl of Northumberland", or more simply, "Northumberland." One can readily see the confusion that is possible, not only because there are four earls (The numbering system, by the way, is not generally utilized in historical documents, thereby heightening the confusion.), but also because three of the four men who held the title were named Henry Percy, being father, son, and grandson respectively. Hence, "see" references are provided to readily identify the person in question.

Sometimes a title of nobility and a surname are identical:

OGLE, ROBERT (d.1469), 1st LORD OGLE

In this case, no "see" reference is required because whether one is looking under "Robert Ogle" or "Lord Ogle", the person in question will still be found.

There are cases, however, where a "see" reference is necessary even though the surname and title are the same:

NEVILLE, LORD - See NEVILLE, JOHN (d.1461)

In the above example, a "see" reference is required because there are sixteen entries for Nevilles. Without a "see" reference specifying which Neville was Lord Neville, the user will spend too much time scanning entries to locate the proper person.

Multiple titles are yet another area of difficulty:

GREY, SIR THOMAS (1455-1501), LORD FERRERS OF GROBY,
EARL OF HUNTINGDON, MARQUESS OF DORSET

During the Wars of the Roses, many English noblemen held more than one title. Thomas Grey, for instance, was known at various points in his life by each of the above underlined titles. It is therefore necessary to have "see" references from each of these back to Thomas Grey.

Yet another problem relates to "styled" nobles, who although not officially granted a given title, are nevertheless referred to by one:

"DORSET, MARQUESS OF" - See BEAUFORT, JOHN (d.1471)

In this case, John Beaufort was qualified to bear the tile of Marquess of Dorset. Since he was a Lancastrian, however, and the Yorkists were in power when he became eligible for the title, he was attainted for treason and never officially recognized. Nevertheless, he is often referred to in history books and documents as the Marquess of Dorset. Therefore, a "see" reference is included, although the title itself has been placed in quotation marks to indicate that it is not an officially recognized title.

Another problem, one that is common to biographical tools of any type, is variant spellings of names:

TUCHET(TOUCHET), JAMES (1398?-1459), LORD AUDLEY

In the above case, a "see" reference is needed from "Touchet" to "Tuchet" with the alternate spelling in parentheses to aide in the proper identification of the individual.

In some cases, however, a "see" reference is not required because the variation in spelling is minor enough that the entry will be found no matter how it is looked up. The entry below is an example of such a case:

DACRE(S), LORD - See FIENNES, SIR RICHARD (d.1484)

Here, Dacre(s) is found whether it is spelled "Dacre" or "Dacres."

Foreign elements in names are also a difficulty:

CLIFFORD, THOMAS (DE) (1414-1455), 8th LORD CLIFFORD
SCROPE, JOHN (LE) (1437?-1498), LORD SCROPE OF BOLTON

In the two examples above, "de" and "le" are foreign articles which could mislead the user. "See" references are not used to solve this problem, however, because so many surnames contained foreign articles in fifteenth-century England. Rather, it is more sensible to include a prefatory note directing the user to disregard all foreign elements when using the biographical dictionary. The articles are retained in parentheses in the actual entries to assist in verification.

One final problem is that of royalty:

RICHARD III (b.1452 ; r.1483-1485)
RICHARD PLANTAGENET, DUKE OF GLOUCESTER

In a majority of cases, the kings during the Wars of the Roses were titled noblemen before they became kings. In the example above, Richard III was also Richard Plantagenet, and was known as the Duke of Gloucester for many years before he became king. It is therefore necessary to have "see" references from a king's family name as well as from any titles that he might have held before becoming king.

This discussion of access points and other considerations relating to the organization of biographical information, has taken place in association with a very specialized topic. Nevertheless, it is hoped that it has been of interest, while furnishing the reader with some insights and information that will help in the evaluation, selection, and use of biographical tools of all types.

SPECIAL HISTORICAL REFERENCE MATERIALS AT THE NEBRASKA STATE HISTORICAL SOCIETY

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ABSTRACT

This paper is an overview of the specialized reference materials available at the Nebraska State Historical Society which are especially useful to archeologists and historians researching Nebraska and Great Plains history including such resource materials as maps and photographs. In addition, information will be provided about the interrelated publications and original records at the Society essential to the local historian and genealogist with an explanation about how a general knowledge of these various reference materials can be helpful to any librarian assisting a patron doing this type of research.

Where was Harvey City, Nebraska? When did William Jennings Bryan visit Arkansas? Is Jane Doe a cousin of Mari Sandoz? Where is Signal Butte? When did great-grandfather come to Nebraska? All of us who do reference work in the library are familiar with the variety of reference questions for which the public wants answers. Sometimes questions may be quickly answered by locating one familiar reference, but usually numerous references must be checked after a staff member ascertains exactly what information is wanted.

At the Nebraska State Historical Society Library and Archives, our patrons research varied topics such as Old West trails; early radio; pioneer women doctors; Indian missions; opera houses; Civil War regimental histories; steamboats; women's suffrage; and the Farmer's Alliance. Patrons may wish to locate photographs of early farm equipment or interiors of homes at the turn of the century; the 1900 State Fair or Omaha's Trans-Mississippi Exposition; a Nebraska Indian chief or John G. Neihardt. Historians and genealogists use unique manuscripts, family letters, or special collections of state government records. During a typical day we might assist a patron in tracing the Nebraska City-Fort Kearny Cut-Off Trail through Hamilton County, provide information about a particular phase in the development of the Union Pacific Railroad, demonstrate to a group of fifth-graders what can be learned from a census enumeration, and grant permission to a major publishing company to publish a sod-house photograph.

The Society's Library contains approximately 70,000 volumes of monographs and serials as well as over 2,000 separately indexed maps and approximately 100,000 photographs. Its specialized collection of Nebraska and western history ranges from several thousand archeological publications, with an emphasis on serials relating to archeology and anthropology of the Great Plains, to priceless immigration pamphlets extolling the wonders of settling in Nebraska. The Society's extensive holdings of Nebraska's published records of territorial and state government, combined with the Archives' invaluable holdings of the original documents, cannot be equaled in any other research center. However, it is our remarkable local history and genealogical research materials (which include Nebraska's community newspapers, family histories, records of organizations, and published and unpublished county and town histories) that have had the most use by the public in recent years.

For the purpose of identifying our monographs, serials, and map holdings, the Nebraska Library Commission Union Catalog contains a duplicate set of all main entry cards in the Society's Library catalog. The Union Catalog also contains the main entries of our newspaper collection. Approximately 21,000 reels of Nebraska's newspapers are available in microform format, including even small villages which had a newspaper publisher during their formative years. A Guide To The Newspaper Collection of the State Archives Nebraska State Hisotrical Society published in 1977 can be purchased as a reference to this collection. Information about this collection may also be located in the Library of Congress' Newspapers in Microform series as well as the current sales catalog of Bell & Howell's Micro Photo Division. Although the Bell & Howell Company sells individual reels of our newspapers, it often expedites ordering if we are contacted for specific reel numbers.

By the legislative acts of 1905 and 1969 the State Archives was given the responsibility to preserve all public records of historical value contained within the offices of the state and governmental subdivisions of Nebraska. The Archives' holdings of these records date from 1854 to present and include county and municipal records and selected federal records relating to the development of Nebraska. In addition, the Manuscript Division of the Archives collects and preserves business, political, religious, and personal records of Nebraskans which reflect the insight concerning personalities and events in Nebraska's history. The manuscript holdings of the Society are listed in the Library of Congress' National Union List of Manuscripts Collections. Another useful reference tool to these collections, with a subject guide and a cross reference, is Nebraska State Historical Society, A Guide to Its Manuscript Division which was published in 1974 by the Society.

Perhaps it would be more useful in mentioning the various types of research materials available in our library and archives to give examples of how they interrelate. A researcher wishing to know more about Indians of the Great Plains might check the Bureau of American Indian Affairs Reports as well as the many other books on this topic. Unpublished U.S. Government records relating to this period in Nebraska's history are available on microfilm; numerous photographs of Indians of the Great Plains are available in our photograph collection.

To further illustrate the usefulness of our research materials, a study of one aspect of state government could utilize both state agency publications and original records and could cross-check this information through our Nebraska Newspaper and Information Index. This special card index is a comprehensive subject index to the Lincoln Journal and Lincoln Star newspapers and the Omaha World-Herald (Sunday Edition) from 1950 to 1977.

For the local historian, our outstanding collection of histories of communities in Nebraska provides both information and clues to additional information. For example, the mention of a particular incident in a local history may lead a researcher to a newspaper article containing greater details about this event.

Knowledge of the establishment of an organization or an institution in a community may lead, through further checking, to published materials such as a special history of the organization or annual reports which contain statistical information. In some cases the original records of a particular organization can be located in our manuscript collections.

One of the best sources of information about early Nebraska communities is the Nebraska State Gazetteer and Business Directory which was published nearly every two years from 1879 to 1917, and it is available on microfilm. It lists businesses in practically every village, town, and city in the state during those years and gives names of community leaders. It traces the development or decline of these communities, thus providing background information which cannot be found in any other source. Sanborn insurance maps are available for 135 Nebraska municipalities. Although the years vary, they may be very helpful when doing research on a particular building and street. For the rural communities, we have nearly 200 landowner atlases which show changes in the communities. A guide to our pre-1900 collection of maps and atlases is volume 12 of the series, Checklist of Printed Maps of the Middle West to 1900 published in 1981, edited by Robert W. Karrow, Jr. of the Herman Dunlap Smith Center for the History of Cartography at Newberry Library. It is available from G. K. Hall & Co.

Here at the Society, local historians search for early photographs and postcards, which graphically show how a community looked, and also order copies of photographs for use in their publications. The reproduction of photographs for sale is an established procedure. One of our outstanding photographs collections is the Solomon D. Butcher Collection which includes over 2,000 photographs of families and their sod homes in Custer County, Nebraska, and neighboring areas. These photographs were taken over a 25-year period and are considered a unique record of social history. They graphically illustrate the life of pioneers in the Central Plains and both national and international book publishers who wish to depict this period of settlement often use them.

We know that countless persons have become interested in researching their families. Our collection of information useful to the genealogist is a natural outgrowth of the collection of community and state records because of the contributions made by individuals and families to community life. Genealogists as well as social historians study the traditions of particular ethnic groups in our state and include information of this type in their family histories; thus family histories may contain valuable records of interest to other historians. In addition, genealogists often collect, compile, and index records which social historians as well as other genealogists find useful, and when these records are added to our collection, greatly enhance its value.

The records most used by the genealogist are often the same records used by the social historian - the census enumerations, land records, newspapers, church records, etc. In order to assist genealogists in using our special resources, we have developed a series of reference leaflets which identify and describe those resources which may be especially helpful. A list of these reference leaflets is appended and are free upon request. Any organization in Nebraska interested in a program describing our genealogical resources may request the use of our slide-tape which tells about our special geneaolgical holdings and permits the audience to observe examples of actual records which would be particularly helpful.

For patrons interested in tracing their pioneer Nebraska ancestors, the Nebraska census enumerations would be one of the first records to check because these may indicate the approximate time and place the family settled in Nebraska as well as the names and ages of the family. The 1900 census also indicates when the head of the household was naturalized, if an immigrant, and also may help when one is determining the parent in a family with a stepparent. For those individuals who purchased land from the federal government, the U.S. Land Tract records will be helpful in determining time and exact location of settlement and even additional family information if the application records are obtained from the National Archives. Perhaps the background of the head of the household will suggest that the 1906 statewide-immigration index and the Grand Army of the Republic records should be checked. An obituary from a newspaper may give the parents' names and tie family relationships together. Of course, county and town histories, special compilations of local records, and biographical publications and indexes need to be checked once a family has been identified as settling in a particular area of the state.

In conclusion, numerous historical topics can be researched in depth at the Nebraska State Historical Society through use of the refined subject indexing provided by the many catalogs, indexes, and guides in our public research areas and through relying on the special assistance given by staff members. Subject specialists from the Society's Archeology, Museum Collections, and Historic Preservation Departments are also there to serve you. The opportunity to utilize so many interrelated records which explain our state's history makes the Society a unique research center.

NSHS REFERENCE LEAFLETS

No. 1---Historical Resources For Genealogists

No. 2---Nebraska Territorial Census Enumerations 1854-1857

No. 3---Index to Naturalizations in Nebraska and some Iowa Counties, 1906 and Prior

No. 4---Newspaper Indexes

No. 5---A Selected List of Nebraska History Reference Materials

No. 6---Local Nebraska History 1966-1976 (A pre-1966 list is published in Nebraska History)

No. 7---Selected Bibliography of General Genealogical Reference Materials

No. 8---Genealogical Periodicals & Newsletters

No. 9---Genealogical Researchers

No. 10--Genealogical Societies in Nebraska

No. 11--Special Indexes Available on Microfilm

No. 12--Nebraska Church Records at the Nebraska State Historical Society

No. 13--Records Relating to Veterans

No. 14--Historical Organizations in Nebraska

BIBLIOGRAPHIC INSTRUCTION FOR CAREER EXPLORATION

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ABSTRACT

In response to student demand for information on scientific and engineering career options, I prepared a set of Library Pathfinder exercises that feature the Guide for Occupational Exploration (U.S. Employment Service, 1979) and Exploring Careers (U.S. Bureau of Labor Statistics Bulletin 2001, 1979). These tools help a student match his own personal traits to job characteristics. Other exercises lead the student to the Subject Card Catalog for books, to the Index to U.S. Government Periodicals for current magazine articles, and to a special bibliography, Occupational Literature, for material from professional associations.

Vocational counseling is now of age and is recognized as a field of study in its own right. Profound skepticism greeted Edward K. Strong when he published his Vocational Interest Blank (SVIB) in 1927. How could anything as subtle and changeable as interests be measured? Dr Strong persisted and over the course of forty years clearly established the validity of occupational interests and a way to measure them. The Strong-Campbell Interest Inventory (SCII), as it is now called, is the prime example of the empirical approach to the measurement of psychological characteristics. The Minnesota Multiphasic Personality Inventory and the California Psychological Inventory use Dr Strong's method.

John L. Holland's Self-Directed Search (SDS) is the latest vocational interest inventory. Several million copies have been sold since 1972. Holland's career development theory holds that there are six personality types who grow up in environments that shape their particular interests. Likewise, there are six types of jobs where these interests can be expressed. A hexagonal model shows the relative compatibility of the different interests with each other. Satisfaction, success, and involvement result from congruence of person and environment. People change jobs to increase congruency.

In their chapter on personality in the Annual Review of Psychology, Ravenna Helson and Valory Mitchel, Institute of Personality Assessment (UCB), recognized Holland's theory with the following comments (25:578):

> Although we have some sympathy with Holland's critics, there is probably a splendid opportunity here for personality and developmental psychology to learn from this system and develop it in directions that are not in the main line of vocational psychology.

The Holland model of Six Occupational Categories correlates closely with the U. S. Employment Service (USES) Interest Areas of Work. The primary difference between the two is that the USES system provides four divisions within the broader Holland Realistic and Social categories.

Recently the American Library Association published Career Planning Materials: A Guide to Sources and Their Use by Roberta R. Egelston (Univ. of Pittsburgh). Allyn & Bacon has just published Career Development: Counseling Through the Life Stages by Charles C. Healy (UCLA). Both of these books are useful to the Career Planning Collection library and librarian. The following set of exercises may be used for any field.

Name ______________________________

LIBRARY PATHFINDER EXERCISES
John D Hill
Science Reference Librarian

General Engineering Technology 100
Dr Harold L Davis
Fall 1981

Ia Exploring Careers (US Bureau of Labor Statistics Bulletin 2001) [Ref Doc L 2.3:]

This publication will help you match your characteristics with those of various jobs. From the following list CIRCLE the job satisfactions that you want from your work.

1. *Help society:* Contribute to the betterment of the world I live in.
2. *Help others:* Help other people directly, either individually or in small groups.
3. *Public contact:* Have a lot of day-to-day contact with people.
4. *Work with others:* Have close working relationships with a group; work as a team toward common goals.
5. *Affiliation:* Be recognized as a member of an organization whose type of work or status is important to me.
6. *Friendship:* Develop close personal relationships with the people I work with.
7. *Competition:* Pit my abilities against others. There are clear outcomes.
8. *Make decisions:* Have the power to set policy and determine a course of action.
9. *Work under pressure:* Work in a situation where deadlines and high quality work are required by my supervisor.
10. *Power and authority:* Control other people's work activities.
11. *Influence people:* Be in a position to change other people's attitudes and opinions.
12. *Work alone:* Do things by myself, without much contact with others.
13. *Knowledge:* Seek knowledge, truth, and understanding.
14. *Intellectual status:* Be regarded by others as a person of intellectual achievement or an expert.
15. *Artistic creativity:* Do creative work in any of several art forms.
16. *Creativity (general):* Create new ideas, programs, organizational structures, or anything else that has not been developed by others.
17. *Aesthetics:* Have a job that involves sensitivity to beauty.
18. *Supervision:* Have a job in which I guide other people in their work.
19. *Change and variety:* Have job duties that often change or are done in different settings.
20. *Precision work:* Do work that allows little tolerance for error.
21. *Stability:* Have job duties that are largely predictable and not likely to change over a long period of time.
22. *Security:* Be assured of keeping my job and a reasonable financial reward.
23. *Fast pace:* Work quickly; keep up with a fast pace.
24. *Recognition:* Be recognized for the quality of my work in some visible or public way.
25. *Excitement:* Do work that is very exciting or that often is exciting.
26. *Adventure:* Do work that requires me to take risks.
27. *Profit, gain:* Expect to earn large amounts of money or other material possessions.
28. *Independence:* Decide for myself what kind of work I'll do and how I'll go about it; not have to do what others tell me to.
29. *Moral fulfillment:* Feel that my work is contributing to a set of moral standards that I feel are very important.
30. *Location:* Find a place to live (town, geographic area) that matches my lifestyle and allows me to do the things I enjoy most.
31. *Community:* Live in a town or city where I can get involved in community affairs.
32. *Physical challenge:* Have a job whose physical demands are challenging and rewarding.
33. *Time freedom:* Handle my job according to my own time schedule; no specific working hours required.

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Ib Exploring Careers (continued)

This career awareness publication emphasizes what people do on the job. Circle those characteristics that you want to go with your job.

Job Characteristics

1. *Problem-solving ability*—the ability to identify a problem and then to decide what should be done to correct it. Auto mechanics, who spend much of their time fixing cars, need problem-solving ability.
2. *Uses tools, machinery*—takes a talent for working with your hands. Often, knowing how machines work is necessary, too. Tool-and-die makers, who use machine tools and precision measuring instruments to produce other tools and metal forms, need skill in this area.
3. *Instructs others*—the quality of helping others learn how to do or understand something. Receptionists and hotel clerks help others in this way.
4. *Repetitious*—work in which the same thing is done over and over again. An assembler who works on a production line does repetitious work.
5. *Hazardous*—involves the use of dangerous equipment or materials or work in dangerous surroundings. Elevator constructors, who work at great heights, have hazardous jobs.
6. *Outdoors*—refers to occupations in which a major portion of time is spent outdoors, frequently without regard to weather conditions. Roofers, who apply roofing materials to the tops of buildings, work outdoors.
7. *Physical stamina required*—able to lift heavy weights, walk long distances, stand for long periods, or stoop frequently. Bricklayers, police officers, and chefs all need physical stamina.
8. *Generally confined*—workers have to stay in one place most of the time. Truckdrivers who sit behind the wheel for many hours and statistical clerks who do their work at a desk for most of the day are examples.
9. *Precision*—work involves high standards of accuracy. Accountants, air traffic controllers, and machinists are examples.
10. *Works with detail*—refers to technical data, numbers, or written materials. Machinists who consult blueprints or written specifications before making each machined product and programmers who write instructions for the computer are examples.
11. *Frequent public contact*—work involves day-to-day contact with people who need information or service. Automobile service advisers, receptionists, hotel clerks, bank tellers, waiters, and barbers are all examples.
12. *Part time*—refers to occupations in which many workers are employed for fewer than 35 hours a week. Waiters and waitresses and real estate agents are examples.
13. *Able to see results*—refers to jobs that produce an actual product or accomplishment. Bricklayers, chefs, and choreographers all see results.
14. *Creativity*—work involves new ideas, programs, designs, or products. Writers, industrial designers, and engineers are examples of the many different kinds of workers whose jobs require creativity.
15. *Influences others*—the ability to stimulate others to think or act in a certain way. Automobile sales workers who influence customers to buy and teachers who inspire students to learn are examples.
16. *Competition on the job*—refers to occupations in which competition with co-workers for recognition or advancement is an integral part of the job. College teachers who compete for tenure, securities sales workers who compete for commissions, and models who compete for assignments are all examples.
17. *Works as part of a team*—refers to occupations in which cooperation with co-workers is an integral part of the job. Instrument makers, who work closely with scientists and engineers to translate designs into models, and school counselors, who work closely with other staff members, are examples.
18. *Jobs widely scattered*—occupations that are found in most parts of the country. Occupations that do not have a dot in this space tend to be highly concentrated in one or a few geographic locations. For example, secretaries work throughout the country while petroleum engineers work mostly in the oil-producing States of Texas, Oklahoma, Louisiana, and California.
19. *Initiative*—jobs that demand the ability to determine on one's own what should be done, as well as the motivation to do it without close supervision. Lawyers and newspaper reporters need initiative.

Make a black dot (●) below the same numbers that you CIRCLED above.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

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Ic Exploring Careers, Table 2 (US BLS Bulletin 2001)

From pages 10 through 19 SELECT three jobs that require characteristics that suits your characteristics best. Each job that is checked (✓) has a feature story.

1. ____________________ 2. ____________________ 3. ____________________

IIa Guide for Occupational Exploration (US Employment Service) [Ref Doc L37.8:Oc 1/2]

This guide is designed to help jobseekers match their interests, skills, and abilities with pertinent fields of work. The world of work has been organized into 12 areas of worker interest. CIRCLE the area that interests you the most.

1. **ARTISTIC:**
   Interest in creative expression of feelings or ideas.
2. **SCIENTIFIC:**
   Interest in discovering, collecting, and analyzing information about the natural world and in applying scientific research findings to problems in medicine, life sciences, and natural sciences.
3. **PLANTS AND ANIMALS:**
   Interest in activities involving plants and animals, usually in an outdoor setting.
4. **PROTECTIVE:**
   Interest in the use of authority to protect people and property.
5. **MECHANICAL:**
   Interest in applying mechanical principles to practical situations, using machines, handtools, or techniques.
6. **INDUSTRIAL:**
   Interest in repetitive, concrete, organized activities in a factory setting.
7. **BUSINESS DETAIL:**
   Interest in organized, clearly defined activities requiring accuracy and attention to detail, primarily in an office setting.
8. **SELLING:**
   Interest in bringing others to a point of view through personal persuasion, using sales and promotion techniques.
9. **ACCOMMODATING:**
   Interest in catering to the wishes of others, usually on a one-to-one basis.
10. **HUMANITARIAN:**
    Interest in helping others with their mental, spiritual, social, physical, or vocational needs.
11. **LEADING-INFLUENCING:**
    Interest in leading and influencing others through activities involving high-level verbal or numerical abilities.
12. **PHYSICAL PERFORMING:**
    Interest in physical activities performed before an audience.

Within each vocational interest area are a maximum of 12 work groups, for example:

02	**Scientific**
02.01	Physical Sciences
02.02	Life Sciences
02.03	Medical Sciences
02.04	Laboratory Technology

05	**Mechanical**
05.01	Engineering
05.02	Managerial Work: Mechanical
05.03	Engineering Technology
05.04	Air and Water Vehicle Operation
05.05	Craft Technology
05.06	Systems Operation
05.07	Quality Control
05.08	Land and Water Vehicle Operation
05.09	Material Control
05.10	Crafts
05.11	Equipment Operation
05.12	Elemental Work: Mechanical

06	**Industrial**
06.01	Production Technology
06.02	Production Work
06.03	Quality Control
06.04	Elemental Work: Industrial

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IIb Guide for Occupational Exploration (GOE) (continued)

From the Summary List of Interest Areas on pages 9 through 12, SELECT a work group and subgroup of occupations to investigate. Turn to the section that corresponds to the selected Interest Area (2-digit GOE code number) and complete the exercises:

1. Interest Area & GOE code: ____________ (see Contents on pages v to vi)
2. Work Group and 4-digit GOE code: ____________
3. According to the Work Group description, what kind of work might you do on jobs in this group? ____________
4. What kind of skills do you need for this kind of work? ____________
____
5. What preparation is needed for a job in this Work Group? ____________
6. Choose one of the Subgroups in this Work Group (6-digit GOE code) ____________
7. Choose one of the Occupations in this Subgroup to investigate further.
   a. Occupational Title: ____________ b. 9-digit DOT code: ____________

IIIa Selected Characteristics of Occupations [Ref Doc L 37.2:Oc 1/2/supplement]

Determine the Strength Factors demanded by the occupation you selected above. See "Part B" that begins on page 295 and is arranged by the 9-digit DOT code. Also see "Appendix A—Physical Demands" on page 465 for an explanation of abbreviations.

1. Str Fac degree: _____ & explanation: ____________

Determine the job characteristics that accompany your 4-digit GOE Code in "Part A".

2. Typical activities and skills required for this Work Group (see description)
____
3. Physical Demands (besides Str Fac) & explanation: a) ____________
   b) ____________ c) ____________ d) ____________
4. Environmental Conditions (see p. 467) a) ____________
   b) ____________ c) ____________
5. Training Time (see p. 469-471) Math ____________
   Language ____________
   Specific Vocational Preparation ____________

IVa Dictionary of Occupational Titles (DOT) 4th edition [Ref Doc L 37.302:Oc 1]

Find the 9-digit DOT code entry that you selected in Exercise IIb7 above: ____________
Turn to the Summary Listing of Occupational Categories beginning on page xxxiv.

1. What Occupational Category does your selection belong? ____________
2. What Occupational Division (first two digits)? ____________
3. What Occupational Group (first three digits)? ____________
4. What Worker Functions (second set of three digits)? [see p. 1369-1371 for key]
   a) Data ____________
   b) People ____________
   c) Things ____________
5. Lead Statement of Definition: ____________

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IVb Dictionary of Occupational Titles (DOT) old 3d edition [Ref Doc L 7.2:Oc 1]

From volume 2 beginning on page 370 select a Worker Trait Group from the Engineering area of work that is close to the second set of 3-digits in your chosen DOT code.

1. Engineering Worker Trait Group ________________
2. Training Time Required (see p. 652 for key) ________________

   GED—Reasoning Development ________________

   Math Deveolopment ________________

   Language Development ________________

   SVP (see p. 653) ________________
3. Aptitudes [Explain what the symbols mean & what level is required for performance]

   G ________________

   V ________________

   N ________________

   S ________________

   P ________________

   Q ________________

   K ________________

   F ________________

   M ________________

   E ________________

   C ________________
4. Interests—which of five pairs of work activities are to be preferred (See p. 654)

   1 or 6: ________________

   2 or 7: ________________

   3 or 8: ________________

   4 or 9: ________________

   5 or 0: ________________
5. Temperaments—what different types of job situations must the worker adjust to?

   ____

   ____

   ____

V. Occupational Outlook Handbook, 1980-81 [Ref Doc L 2.3:2075]

Find the page number of your chosen occupation by turning to the DOT Index that begins on page 626.

1. DOT Code (9-digits) & Page Number in OOH: ________________
2. Working Conditions: ________________
3. Places of Employment: ________________
4. Employment Outlook: ________________
5. Earnings: ________________
6. Sources of Additional Information:

   ____

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VI. Occupational Projections & Training Data—1980 edition [Ref Doc L 2.3:2052]
(U S Bureau of Labor Statistics Bulletin 2052)

Compare the number of job openings in the job closest to your chosen occupation to the number of trained applicants:

	Pages
Construction	47, 87, 94, 104
Transportation	50, 87, 94
Scientific & Technical	54, 88, 94, 99, 101, 107
Mechanical	61, 88, 94, 108

1. Occupation: ________________ 2. Training: ____________________________

3. Experience: ____

4. Average number of annual openings projected for 1978-90: ________________

5. Total average number of annual training completions, 1978-90: ______________

VII. Index to U S Government Periodicals [Index Table #4—Z 1223 .Z9 I5]

More current information for vocational guidance may be found in such magazines as the MONTHLY LABOR REVIEW and the OCCUPATIONAL OUTLOOK QUARTERLY, which are indexed in this reference tool. The SuDoc Classification Number for each government magazine is given on p. 6 - 7 of the Index. Find an interesting article under such Headings as:

Career Education
Education, Cooperative
Employment
Engineering—Study & Teaching
Industry and Education
Occupations
Technical Education
Vocational Guidance
Work

1. Subject Heading: ________________ 2. Author: ____________________

3. Title of Article: ____

4. Source: ____
(journal title) (volume number) (issue) (pages) (date)

5. Superintendent of Documents Classification Number of Periodical: ____________

VIII. Occupational Literature: An Annotated Bibliography [Ref Z 7164 .V6 F67]

Look up your occupation in the pages after p.44:

1. Occupation: ______________________________ 2. DOT Code Number: ______

3. Pamphlet or Book Title: ____

4. Imprint: ____
(source or publisher) (date) (pages) (cost)

IX. Subject Card Catalog

The Subject Catalog is the section of the Card Catalog located nearest to the Reference Desk. Find the following information about a book listed under the Subject Heading: ENGINEERING — Vocational Guidance.

1. Call Number: ________________________ 2. Author: ________________

3. Title: ____

4. Imprint: ____
(place of publication) (publisher) (date)

X. Make a comment about your reaction to this Library Pathfinder on Career Information:

1. ____

2. ____

3. ____

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PRACTICAL CONSIDERATIONS IN VIDEOTAPED LIBRARY INSTRUCTION

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ABSTRACT

The University Library of the University of Nebraska at Omaha conducts an extensive program of bibliographic instruction. While most of these lectures are tailored to the levels of the individual classes, a substantial number of them involve basic instruction in the use of the library.

In January of 1981, the Reference Department wrote and produced a videotape explaining several important aspects of basic library usage for a frequently repeated section of one class. Four months later a second tape was made which covered a number of other library tools.

This paper stresses the lessons learned from the first tape which were incorporated into the second tape, as well as lessons learned from the second and recommended for subsequent videotapes. Segments of both tapes are shown.

The Reference Department of the UNO Library has developed over the years a very effective library instruction program for the beginning undergraduate. Recently we decided to improve this program further through the use of videotape.

This library instruction program is used specifically with students who are enrolled in the University Division, a program which provides a setting for the student who has not yet made a definite choice as to major. A one-credit-hour Academic and Career Development (ACD) course is required of all freshmen in the University Division. Two weeks out of every semester are set aside for instruction in the use of the library to help students achieve a degree of independence and competence in understanding how to use certain library resources, and to help the students develop a positive attitude toward the library.

The first of the two library instruction classes deals with departments within the library, policies and services of the library, use of the card catalog, Library of Congress Subject Headings, indexes, periodicals, and how to locate all of these items in the library. The second class instructs the students in the use of newspaper indexes, abstracting services, the Monthly Catalog of U.S. Government Publications, and how to locate newspapers and documents in the library. This second session of ACD was chosen to videotape first, since it dealt with more specific resources and was somewhat shorter in duration.

In recent years, these library lectures have been given by professional librarians from the Reference Department, using 35mm. slides to complement an oral presentation. This slide/lecture method had proven effective, but we were looking for a more efficient, consistent, and less time-consuming method. As the university increased its enrollment, so did the Academic and Career Development classes increase in number and size. In the Fall of 1980 there were 16 ACD sections and the Reference Department instruction reached 327 of these students.

There have been increasing demands on the Reference staff to present more library instruction lectures of all sorts. In 1979-80, 210 lectures were given to approximately 3500 students. In the interest of maintaining personal contact and a carefully tailored lecture system, we wanted to explore ways to minimize repetition of frequently delivered general lectures. Computerized database searches and faculty status (and expectations) arrived simultaneously in the summer of 1979, and have entailed additional scheduling demands on the available time of reference staff members. Our Reference Desk is open 81 hours a week, and a professional is on duty at the desk each of these hours. Our staff consists of six professionals and three FTE paraprofessionals.

Our feeling was that a few frequently repeated lectures could be put on videotape so that additional time could be allocated for follow-up with students. We tried to make a very high quality tape to eliminate variation among various presentations by the same lecturer as well as mong the different people presenting the same lecture. Our slide presentations typically took 30-40 minutes, followed by a ten minute tour of the specific tools described. For better and for worse, the tapes are more tightly packaged and presented, so the first one takes about 20 minutes to view and the second one just under 16 minutes.

We had the advantage of having both moral and financial support from our library administration. Our director funded the first tape - $800 for a tape that was 16 minutes long. After seeing the results and evaluations of the first tape, he authorized funding to tape the second lecture as well.

Another great advantage was having access to good facilities and expertise. Our library owns a 6' projection TV unit as well as video-cassette recorders and monitors. The university operates a TV station which has excellent staff and equipment.

Once the decision was made to produce the tape, several other decisions had to be made. The first of these was whether to tape on-site in the library with portable equipment or to bring the items to be discussed to the TV studio for taping there.

We chose to tape in the library for several reasons: it allows the students who are typically not familiar with the building to see the spatial relationships among the different departments and resources; they are able to see how one moves from the L.C. Subject Headings volumes to the subject portion of the card catalog, for example. They can see what each tool looks like and roughly where it is located in the building.

A drawback in choosing this course is that the videotape is quite library-specific. That is, since we refer to "Index Table 5..." or "Abstract Range A...," the tape is not readily adaptable to other libraries. In this form our tape is very appropriate for use with other introductory classes apart from the University Division, since the library resources introduced are widely used in virtually all subject areas of academic study. The tapes, at 20 and 16 minutes, are both short enough that they can be introduced, shown, and followed up either with reinforcement of the concepts covered or with explanation of subject-specific tools related to the needs of a particular class. We normally conduct a brief tour, as mentioned above, stressing the locations of the items presented.

Our campus television station, KYNE, obviously played an important role in our decision to make the videotapes. They gave advice at every stage of production and carried out all the technical work. To prepare a script, we recorded an actual lecture on audio-cassette, transcribed it, and then read through it in front of several reference department colleagues. Many small refinements were made in this manner, and the final lecture we arrived at by consensus was our best effort.

The next step was to "block out" the lecture with the

TV station producer/director in the library to plan the shooting. A few days later the producer/director was back with a cameraperson, camera, and recording equipment, and spent two and a half hours videotaping.

The most critical and time-consuming portion was the editing process. The two librarians most closely involved with the show spent one and a half hours with the director giving her an even better feel for what we wanted to present, then left her to edit for several more hours. The next day we went back to view the "finished product" on 1" tape. At this stage we made a few minor suggestions which were incorporated into this master tape, and this final copy was dubbed onto 3/4" video-cassettes. We keep the first copy in the Reference Department and it is used when we give lectures. The second copy is kept in the library's media center and is available for any patron to view at any time. We sometimes send interested patrons there from the Reference Desk, and the tapes are also listed in the card catalog.

We have since videotaped the first ACD library presentation, so that now the Reference Department presents library instruction to all ACD classes utilizing the tapes in the knowledge that all lectures are well presented and consistent. Either professionals or paraprofessionals introduce the tapes, follow them up with comments, respond to questions, and conduct brief tours.

Thus far you have heard a summary and update of a presentation given at this same conference a year ago at Wayne. What I would like to do in the time remaining is to list a number of hints and observations from the perspective of one year later, show you several spots from the two tapes (which I hope will highlight some of the changes we incorporated), and then respond to any questions or comments that you may have about the making of the tapes or the uses we have made of them.

Some of these observations seem obvious in retrospect, but when we were making the first tape the problems were far less apparent to us. For example, after we went through the whole script writing and editing process, we should have gone back and purged it for specifics such as hours of operation, costs of services, and minute details of location. A comment such as "the Reference Desk is staffed nearly every hour that the library is open" should suffice, as opposed to our statement that it is staffed 77 hours a week - we have since expanded to 81 hours a week. Copy machine costs haven't changed yet, but there was really no need to specify 5¢ a sheet for copies from paper and 10¢ a sheet for copies from microforms - a comment that inexpensive copies can be made from microforms as well as from books and magazines would have served the same purpose. Similarly, saying that the Reader's Guide will be found on the Index Tables is preferable to specifying that it is found on Index Table Number 1. It is now, but it may not be when the student looks for it next year or the year after that.

The more specific the information in the videotape, the more dated it will become in an amazingly short time. Students viewing the tape will not notice this very quickly, but the staff showing the tape certainly will. Besides, to maintain the human touch we need some substantive items of information to convey in the introduction and follow-up of the tape, and in the tour as well. Specific costs and precise locations can be easily explained as needed in there personal contacts.

Another related point - the more specific the information in your tape, the less flexibility you will have in its use. We made these tapes for use with the ACD classes of the University Division, but we have found many other uses for them. A number of references to exercises and questions in the ACD worksheet highlight the fact that the tapes were made for one purpose but are frequently used for other purposes. We could easily have made the same points without referring to particular workbook citations.

We elected to have one member of our Reference Department staff do all the on-screen instruction. There were several advantages to this: first and foremost, she is very good at it - a natural talent; she makes a very nice appearance, and has a pleasantly reassuring manner; and she is knowledgeable, yet sensitive to the feelings of those who are unfamiliar with the use of library tools. The disadvantage:

her husband is in the Air Force, and they were transferred to Germany. Thus, she is not available for further taping, or for revising and editing the existing videotapes. Having several people each explain one or more reference sources, or having students and staff demonstrate the use of library tools being discussed with a "voice-over" would be far easier to expand, revise, or edit.

We found that in videotape production, as in computer database searching, there is a definite and dramatic tradeoff between time and money - the more you have of one, the less you need of the other. We tried to prepare carefully for each of our two tapes, but we learned enough making the first one that we were much better prepared for the latter. We did our preliminary work more thoroughly and effectively so that we could make far more efficient use of the time we were "on-line" with the director and camera crew.

Any editing is done at the rate of $75 per hour, so it was important to convey our wishes clearly and concisely to the director (who was also the editor), at each step of the process. We are very pleased with the resulting tapes - we also recognize that we will just have to live with some of the little problems we see, at least until we accumulate enough of these little problems to justify the expense of a major revision. Making small changes would simply not be cost-effective.

We made a conscious decision against trying to incorporate any real humor into the tapes. We feel that it is important to present the library as a place where real people work, and to emphasize the approachability of the people in all of the public service areas. At the same time, we felt that it would be most effective to keep the tape succinct and factual and rely on introductory and follow-up sessions by reference staff members to convey this feeling of receptiveness and service.

The segments of of the videotapes that were shown and discussed:

TAPE I

Counter set 78 and following - specific hours of service
" " 108 " " - card catalog close-up
" " 118 " " - call number close-up
" " 205 " " - transition between topics

TAPE II

Counter set 24 and following - "for purposes of your workbook..."
" " 47 " " - NYT Index citation close-up
" " 260 " " - Government documents introduction

ANALYZING AND DEALING WITH PRODUCTIVITY PROBLEMS IN THE LIBRARY ORGANIZATION

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[ABSTRACT ONLY AVAILABLE]

Many of the productivity problems which affect library staff have their cause in the structurally-produced processes of the organization. By first systematically analyzing problems within their structural context, problems in the staff's behavior may be seen resulting from the organization of workflow, spatial-physical barriers, task complexity, or size of a group. The Melcher model for analyzing group behavior suggests to managers which changes might be effective and which ineffective in promoting employee productivity. Decentralization, delegation, departmentation, standards, and the reward system can influence the extent, or lack, of problem behavior. Leadership and personality also play key roles in promoting staff effectiveness.

LIBRARY EDUCATION IN THE 80'S: NEBRASKA WESLEYAN'S RESPONSE TO THE CHALLENGE

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ABSTRACT

Nebraska Wesleyan University is the only school in the state which offers a unique Library Science program training Library Technicians and School Media Specialists, as well as providing a minor field of study for other interested students. In order to meet today's challenge, the Library Science Department at Wesleyan is currently revising and developing courses which emphasize techniques and services of modern librarianship. A course on OCLC is already available. On-line data-base terminals (DIALOG) to be installed will serve as a cluster around which new courses can be developed. Future students in Library Science will hopefully benefit from the broadened spectrum and up-dated skills in modern information technology.

Library education in the past ten years has been facing drastic changes because of the fast pace of technological development in our society. The invading of computer technology has a great impact on the library profession. Today, wherever we are, we can hardly go without noticing the growing power of the computers; computers of all sorts: microcomputers, minicomputers, wordprocessors, etc. According to the computer specialists, "the future of information dissemination would be in technology."[1] The powerful and versatile personal computers are also being used almost everywhere, and an estimated three million personal computers will be sold this year alone.[2] Current published information about technology is available everywhere. The growth of modern science and technology is so rapid and so over-whelming that many people can't help but feel a little scared, and develop technophobia because of it.

The total impact of the new technology is tremendous in regard to library services and library education. Libraries will become obsolete if they do not face the reality or do not accept what technology can do for them. Library schools will be out-dated very soon in training their students. Many libraries in the country are moving toward computer automation and computer networks are also booming at a fast pace. OCLC now has 2895 participating libraries in the country,[3] and its on-line system links over 6000 libraries in the U.S., Canada, Mexico and Great Britain.[4]

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1. "ACRL Symposium Eyes Advanced Technology," LIBRARY JOURNAL, Jan. 1, 1982. pp. 11-12.
2. "To Each His Own Computer," NEWSWEEK, Feb. 22, 1982. p. 50.
3. OCLC Participating Institutions, Jan. 1982. (Data is based on information furnished by OCLC as of Dec. 31, 1981.)
4. OCLC Annual Report, 1982.

Today's library education is also facing a crisis which has never been experienced before. Many of the graduate library schools have been re-evaluating and re-examining their educational goals and their curricula. Some have changed either their status, or their names from Graduate School of Library Science to Graduate School of Information and Library Science.[5] New courses have been developed and taught in order to meet the demand.

In his article, "GREAT EXPECTATIONS: LIBRARY AND INFORMATION SCIENCE EDUCATION AT THE CROSSROADS,"[6] Mr. Robert D. Stueart mentioned that "the purpose of education for library and information science has not changed greatly over the years, although its content and techniques have." And this change in "content and techniques" is brought on specifically by the needs and demands of today's technological society.

By surveying the existing literature on library education, we can very clearly find today's trend. Most of the current articles on library education are concerned with the graduate level of studies. Yet, because of the fact that the library and information worlds are facing this drastic change, they also need a greater force of trained Library

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5. "Sam Houston Library School Attains New Status" and "UI-Urbana Amends Names of Its Library School," LIBRARY JOURNAL, July, 1981. p. 1372. Also: Case Western Reserve University Bulletin, 1982-84. p. 3.
6. Stueart, Robert D., "Great Expectations: Library & Information Science Education at the Crossroads," LIBRARY JOURNAL, Oct. 15, 1981. p. 1989.

Technicians (Library Assistants or Paraprofessionals) to carry out many of the tasks involved in library services, and relieve the professionals for more demanding and challenging tasks. Today's libraries can no longer afford to hire professional librarians to fill non-challenging, quasi-professional positions any more. Today's library users, being no longer the same as a decade or two ago, demand better, more efficient and sophisticated services to meet their information needs. Libraries can certainly benefit, on both sides of the front, from employees properly trained as Library Technicians.

However, as a reflection on this trend, the Bachelor program in Library Science has been fading all over the country. In 1979, Nebraska had six schools listed in the American Library Directory as offering BA or BS in Library Science.[7] In 1980, five schools were listed;[8] and in 1981, only four were listed.[9] Among them, Nebraska Wesleyan University is the only school which offers a unique Library Science program training Library Technicians and School Media Specialists, as well as leading to Bachelor degrees with Library Science as a minor. Wesleyan's Library Science program was first established in 1960; and it has been under the directorship of Mrs. Lois Collings since 1969. The

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7. See Appendix A.
8. See Appendix B.
9. See Appendix C.

total number of graduates with the degree of Associate of Science in Library Science has now reached 83; the total number of graduates with a School Media endorsement is 35; and 16 have graduated with Library Science as a supporting field.[10] The graduates from the program have flourished all over Nebraska.[11] The Library Science training has proved to be so very adequate that some of our graduates with the Associate of Science degree are currently holding highly responsible jobs. Some of them went further to finish their Bachelor's degrees in their chosen fields; and some went to graduate schools of Library Science.

Wesleyan's Library Science program is designed to provide a strong basic-skills training and fundamental knowledge in librarianship. It offers three different programs leading to three different degrees: the program for the Associate of Science degree (for Library Technicians),[12] the program for Endorsement as an Educational Media Specialist,[13] and the program of Library Science as a Supporting Field.[14] Although Wesleyan's Library Science program is currently considered adequate, we must nonetheless follow today's trend in library education and equip our students with up-to-date knowledge in librarianship to meet the demands of their future jobs. Students in Library Science programs should be prepared in their course work in accordance with the modern technology; they need to be exposed with the future shock in technology before they leave the school.

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[10] See Appendix D.
[11] Interview with Mrs. Lois Collings, Department Head of Library Science Department, Nebraska Wesleyan University.
[12] See Appendix E.
[13] See Appendix F.
[14] See Appendix G.

Nebraska Wesleyan University is a four year liberal arts college and its Library Science program is a part of the Professional Education Division which is accredited by the North Central Association of Colleges and Secondary Schools. Wesleyan is currently in the process of curriculum reviewing and revising. A task Force on Curriculum Review was formed in the Fall of 1980, and has been working very hard every since. To meet the challenge of the 80's, all Library Science courses have been up-dated and revised to a certain degree. In 1978, a basic-skills course in the OCLC system was developed by Mrs. Gabriele Cope. It is designed to train the students in the basic OCLC operation knowledge and skill. This course has been very successful and highly in demand. It was also offered many times through Wesleyan's WILL[15] program as well as summer sessions to provide an opportunity for the adult learners to keep abreast of the field. This course has been kept up-to-date so that students can be enriched with practical hands-on experience as well as basic

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15. WILL (Wesleyan Institute of Life-Long Learning. Director - Dr. Richard Quinn).

concepts of the computer technology. Students finished with this course can sometimes be placed on a job right away as an OCLC operator.

In 1980, a new course in Acquisition and Serials Management was also developed by Mrs. Cope. Other courses such as Administration of Libraries, School Media Centers, and Children's Literature were also up-dated and revised. Students are offered the latest information; and tours of various libraries and Media Centers are given. Students in the Reference Materials, Materials Selection, and Books for Young Adults classes are also given thorough up-dated training. Demonstrations of various forms of on-line reference services are given during regular semesters for students in the Reference Materials class. Guest speakers are sometimes invited. Both theore~~c~~tical as well as practical concepts of librarianship are given in all these course. The Library Science program includes a basic core curriculum and electives so that students have a variety of courses to choose from.

These are just some examples of what has evolved in our program in recent years. Our future challenge is in the new technology and library automation. Wesleyan is planning to have DIALOG on-line services soon. The on-line data-base terminal to be installed will serve as a cluster around which new courses can be developed. New courses with the team-taught format is another possibility in utilizing the available OCLC in cataloging, together with the DIALOG in reference services and some aspects of AV and computer hardware. Course titles such as "Libraries and Machines" will be introduced. Our new Director, Mr. John Robson, is very knowledgeable in AV and computers; his expertise will certainly bring to our program many new approaches in teaching.

The modern technology in the information world is a very exciting challenge to us. At Wesleyan, we are very much alive as a "teaching library"[16] in that all professional librarians teach in the Library Science program, offering their knowledge and experience to the students in theory and practice. The professional librarians also have dual positions both as Library Science program faculty members and as the practicing librarians. However, Wesleyan's Library Science program is in no way competing with the graduate study in librarianship. The program is not designed as such. Nevertheless, the program covers many facets of knowledge in basic librarianship. Future students will benefit from the broadened spectrum, and gain up-dated skill in modern information technology. The career options for our future students will also be widened by the strong basic training. With this training, students are in no way limited in their future career. Besides the traditional library settings, they can work in a business company, law firm, publishing company,

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16. Gorman, Michael, "The New 'Teaching Library'," AMERICAN LIBRARIES, Dec. 1981. pp. 670-671.

art gallery, museum, or as a storyteller, booktalker, etc.; and many undoubtedly will pursue their study further and become professional librarians.

To conclude, nothing serves better in emphasizing our point than to quote a distinquished library educator, the late Dean Jesse H. Shera,[17] on the aim of library education: "...to educate students for the future, to develop in our students a flexibility of mind and an attitude of open-minded inquiry, a hospitality to innovation, a willingness not to take anything for granted and not to be conservative, but to look hard at everything and judge it on its own terms as best one can - not to be frightened of it because it is new or different."[18]

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[17] Dean Emeritus of Matthew A. Baxter School of Information and Library Science, Case Western Reserve University, Cleveland, Ohio. Died on March 8, 1982.

[18] Shera, Jesse H., KNOWING BOOKS AND MEN: KNOWING COMPUTERS, TOO. Littleton, CO, Libraries Unlimited, Inc., 1973. p. 218.

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APPENDIX A

NEBRASKA

Year	Name of Institution	Program & Type of Training Offered	Degree & Hours Offered
1979	CHADRON STATE COLLEGE	Educational Media Program - School	BA & BS with Libr Sci major or minor, 24 sem hrs.
	KEARNEY STATE COLLEGE	Educational Media Program - School	BA & BS with Libr Sci minor, 24 sem hrs.
	NEBRASKA WESLEYAN UNIV.	Library Assistant Program - Libr Tech Asst	AA in Libr Tech, 32 sem hrs; BS with Libr Sci minor, 24 sem hrs.
	UNIVERSITY OF NEBRASKA - OMAHA	Library Media Program - School	BS with Libr Sci major or minor, 41 sem hrs; MED, 15 sem hrs.
	UNIVERSITY OF NEBRASKA - LINCOLN	Teacher's College - School Media Specialist	MA & MED in Educ Admin with specialization in School Media Adm., 47 sem hrs.
	WAYNE STATE COLLEGE	Library Science & Educational Tech. Prog. - Public, School; Public & School Libr Tech Asst.	BA & BS with Libr Sci major or minor, 30 sem hrs.

SOURCE OF INFORMATION: American Library Directory, 32nd ed., 1979.

APPENDIX B

NEBRASKA

Year	Name of Institution	Program & Type of Training Offered	Degree & Hours Offered
1980	CHADRON STATE COLLEGE	Educational Media Program - School	BA & BS with Libr Sci major or minor, 24 sem hrs.
	NEBRASKA WESLEYAN UNIV.	Library Science Program - College, Public & School, Libr Tech Asst.	AS in Libr Sci, 43 sem hrs; BA & BS with Libr Sci minor, 43 sem hrs.
	UNIVERSITY OF NEBRASKA - OMAHA	Library Media Program - School	AS with Libr Sci major or minor, 41 sem hrs; MED, 18 sem hrs.
	UNIVERSITY OF NEBRASKA - LINCOLN	School Media Specialist Program - College & School	MED in Libr Sci, 30 sem hrs; PhD, 30 sem hrs.
	WAYNE STATE COLLEGE	Library Science & Educational Media Program - Public & School; Public & School, Libr Tech Asst.	BA & BS with Libr Sci major, 30 sem hrs.

SOURCE OF INFORMATION: American Library Directory, 33rd ed., 1980.

APPENDIX C

NEBRASKA

ar	Name of Institution	Program & Type of Training Offered	Degree & Hours Offered
81	CHADRON STATE COLLEGE	Library Media Program - School	BA & BS with Libr Media major, 30 sem hrs.
	NEBRASKA WESLEYAN UNIV.	Library Science Program - College, Public & School, Libr Tech Asst	AS in Libr Sci, 43 sem hrs; BA & BS with Libr Sci minor, 43 sem hrs.
	UNIVERSITY OF NEBRASKA - OMAHA	Library Media Program - School	BS with Libr Sci major or minor, 41 sem hrs; MED, 18 sem hrs.
	UNIVERSITY OF NEBRASKA - LINCOLN	School Media Specialist Program - College & School; Media Specialists	MED in Libr Sci, 30 sem hrs; PhD, 30 sem hrs.

SOURCE OF INFORMATION: American Library Directory, 34th ed., 1981.

APPENDIX D

NEBRASKA WESLEYAN UNIVERSITY

Program for Endorsement as as Educational Media Specialist

Students completed the program, 1969-present	Total No.	Working as Teachers	Working as Media Spec.	Working at other jobs	Unknown
	35	11	11	3	10

Program for Library Science as a Supporting Field

Students completed the program, 1969-present	Total No.	Advanced Degree (MS in LS)	Presently working	Unknown
	16	9	11	5

Program for the Associate of Science Degree for Library Assistants

Students completed the program, 1973-present	Total No.	Adv. Degr. (BA or BS)	Adv. Degr. (MS in LS)	Adv. Degr. (Subject)	Cur. St. (MS in LS)	Cur. St. (BA or BS)	Working	Unknown
	25	3	2	1	1	2	17	5

TOTAL NUMBER OF GRADUATES (from three programs)------ 83
TOTAL NUMBER CURRENTLY ENROLLED IN AS DEGREE_________ 8

Information is provided by Mrs. Lois Collings, Department Head of Library Science Department, Mar. 1982.

APPENDIX E

NEBRASKA WESLEYAN UNIVERSITY
DEPT. OF LIBRARY SCIENCE

Associate of Science Degree for Library Assistants, 1982/83

The associate of science degree of library assistants is a two-year, 64 credit hour program. It is divided equally between courses chosen from the various academic disciplines of the college and the courses required in library science. Except for Lib. 196 (the practicum) which may not be taken until all of the library courses have been completed, there is no special sequence of courses necessary, except when noted in some of the elective courses. All of the courses listed in the library science program are offered during each academic year.

GENERAL REQUIREMENTS

Fine Arts-----------6 hours
(from two fields)
- Art
- Music
- Speech and Theatre Arts

Humanities-------------9 hours
(at least two fields)
- Foreign Language
- English
- World Civilizations
- Philosophy
- Religion

Social Science-----9 hours
(at least two fields)
- Economics
- History
- Political Science
- Psychology
- Sociology/Anthropology

Mathematics and Natural Sciences--8 hours
(at least two fields)
- Biology
- Chemistry
- Mathematics
- Physics (Astronomy and Physical Science)

Total ---- 32 hours

LIBRARY SCIENCE REQUIREMENTS

Lib. 101	Administration of Libraries-----------	3 hours
Lib. 102	Reference Materials--------------------	3 hours
Lib. 103	Selection of Educational Materials----	3 hours
Lib. 104	Cataloging and Classification---------	3 hours
Lib. 169	Books for Young Adults-----------------	3 hours
Lib. 196	Library Practicum----------------------	8 hours
Ed. 168	Children's Literature------------------	3 hours
Ed. 175	Audiovisual Aids-----------------------	3 hours
	Total-----	29 hours

LIBRARY SCIENCE ELECTIVES (Choose courses totaling 3 hours)

Lib. 193	Special Projects----------------	1, 2, 3 hours
Lib 201	Advanced Classification----------------	3 hours
Lib. 106	Introduction to OCLC------------------	1 hour
Lib. 190	Selected Topics-----------------------	3 hours
Lib. 110	School Media Center-------------------	3 hours
	Total-----	64 hours

APPENDIX F

NEBRASKA WESLEYAN UNIVERSITY
DEPT. OF LIBRARY SCIENCE

Program for Endorsement as an Educational Media Specialist, 1982/83

The Nebraska State Department of Education has recently adopted a 30-hour, competency based program for endorsement as an educational media specialist. The Nebraska Wesleyan program listed below complies fully with these requirements. To secure endorsement as an educational media specialist, an individual must also be certified as an elementary or secondary teacher.

Lib. 101 Library Administration------------------3 hours
Lib. 102 Reference Materials---------------------3 hours
Lib. 103 Selection of Educational Materials------3 hours
Lib. 104 Cataloging and Classification-----------3 hours
Lib. 169 Books for Young Adults------------------3 hours
Lib. 170 Supervised Practicum in School Media Centers 4 hours
Lib. 110 The School Media Center-----------------3 hours
Ed. 168 Children's Literature-------------------3 hours
Ed. 175 Audiovisual Aids------------------------3 hours
Ed. 243 Improvement of Reading------------------3 hours

Total-----31 hours

The following elective courses taught at NWU are recommended, but are not a part of the 31-hour required program.

Lib. 193 Special Project------------------ 1, 2, 3 hours
Lib. 201 Advanced Classification-----------------3 hours
Lib. 106 Introd. to the OCLC System--------------1 hour
Art. 232 Photography-----------------------------2 hours
Lib. 190 Acquisition and Serials Management-------3 hours

APPENDIX G

NEBRASKA WESLEYAN UNIVERSITY
DEPT. OF LIBRARY SCIENCE

Program for Library Science
as a Supporting Field
1982/83

A student may major in any of the departmental programs he wishes, and take library science as a supporting field. The advantage in so doing is to provide some training in a job skill. The program consists of 24 credit hours of course work in library science, of which 18 hours are required; and the remaining 6 hours may be chosen from the list below.

REQUIRED COURSES

Lib. 101 Administration of Libraries-------------3 hours
Lib. 102 Reference Materials---------------------3 hours
Lib. 103 Selection of Educational Materials------3 hours
Lib. 104 Cataloging and Classification-----------3 hours
Lib. 169 Books for Young Adults------------------3 hours
Ed. 168 Children's Literature-------------------3 hours

Total----18 hours

ELECTIVE COURSES

Lib. 193 Special Projects-----------------1, 2, 3 hours
Lib. 106 Introd. to OCLC-------------------------1 hour
Lib. 201 Advanced Classification-----------------3 hours
Ed. 175 Audiovisual Aids------------------------3 hours
Lib. 190 Acquisition and Serials Management-------3 hours
Art 232 Photography-----------------------------2 hours

FOUR CARTOGRAPHIC CONCEPTS
USED IN THE LC
MARC MAPS FORMAT

John D. Hill
University Library
University of Nebraska at Omaha
Omaha, Nebraska

[ABSTRACT ONLY AVAILABLE]

Map relief, base map projection, map scale, and map coordinates are the four concepts developed in this paper. Cartographers use four relief techniques to show difference in elevation from sea level. They use two dozen mathematical projections to solve the problem of representing the curved earth's surface on a flat piece of paper. They use various map scales and systems of map coordinates or grids to suit their purposes.

LEGAL REFERENCE IN A NON-LAW ACADEMIC LIBRARY

Paul F. Hill
Klutznick Law Library
Creighton University
Omaha, Nebraska

ABSTRACT

Most problems and issues involve legal as well as other questions. Academic library clientele need reference help in finding information and sources in law. The academic non-law trained reference librarian can adequately serve this need with a basic knowledge of the legal system and legal bibliography. Law books appropriate to the non-law academic library will be discussed, and also the question of unauthorized practice of law.

Almost every question in today's society resolves itself into a legal issue. The issues the law has had to deal with range from the most fundamental to those verging on the frivolous. The law has had to determine the time life begins and what constitutes death on the one hand, to whether there is a constitutional right to a particular hair style on the other. A constant stream of court decisions, legislation, and rules pour from state and federal government. Non-law academic librarians should make a careful selection of which of these materials to acquire. If reference librarians are to service these materials effectively, they should have a general understanding of the legal system. It is not necessary to have any substantive knowledge of law itself.

There are three sources of law: Common law, statutory law, and administrative law. The constitution is separate from these. It is the organic or fundamental law of the nation or state. It sets out the form of government, and it limits the actions of the government in that the constitution may not be infringed by legislative or administrative action. An academic library should have both the federal and the Nebraska constitutions. An annotated constitution is preferable. Annotations are brief synopses of court decisions which have construed each section of the constitution. The Government Printing Office has an excellent one-volume annotated federal constitution, Constitution of the United States, Analysis and Interpretation. It was last updated in 1978. The only annotated Nebraska constitution is printed in Volume 2 of the Revised Statutes of Nebraska.

Common law is basically judge-made law as expressed in court decisions of appellate judges. In theory, judges give effect to the customary practices of the people. For example, the Uniform Commercial Code (Volume 6 of the Revised Statutes of Nebraska) is the customary law of merchants enacted into statutory law by the legislature. The trend of the 20th Century is for more and more common law to be made more precise by its codification into statutory law. For example, the common law rule expressed by caveat emptor (let the buyer take care!) has been greatly modified by consumer protection legislation. The rule now is more apt to be caveat venditor.

The shift toward statutory law, however, has not reduced the work of courts. The courts frequently must decide what legislation means and how it applies to particular situations. An example of this is the careless driving statute. Careless driving in Nebraska is prohibited by statute, but the Unicameral can hardly be more precise about exactly what constitutes careless driving. That is necessarily left to the courts. As careless driving cases are appealed to the State Supreme Court, a body of common law is built around the statute to produce a reasonably precise meaning.

There are three levels of United States courts: The Federal District Court (the trial court), the Circuit Court of Appeals, and the Supreme Court. A court report is a memorandum or opinion, with concurring and dissenting opinions, if any, written by a judge. Some District Court cases are reported, most Court of Appeals cases, and all Supreme Court cases which are accepted for decision. Most academic libraries would want only the U.S. Supreme Court cases on the federal level. These are available from the depository system under the title, United States Reports. It takes several weeks to get even the preliminary slip opinions from the depository. Libraries that need a more timely reporting can purchase either United States Law Week or Supreme Court

Bulletin.

On the Nebraska level, the only significant reported court is the Nebraska Supreme Court. Nebraska Reports can be purchased from the State Librarian. A private publisher currently supplies weekly advance sheets.

Neither federal nor state government supply an index to the reports. (There is an index in each volume, but since there are over 400 U.S. Reports and over 200 Nebraska Reports, this is of little value.) If one's primary use of the reports is to find a case to which one already has the citation, then the lack of a subject index is no detriment. If users need to access the reports by subject, an index is necessary. Two publishers sell indexes to the U.S. Reports; West's United States Digest, and Lawyers Cooperative's United States Digest. West also publishes the Nebraska Digest. These are multi-volume sets kept up-to-date with annual pocket parts. The cost is reasonable after the initial purchase. Each index has a table of cases volume to find cases if one knows the name of the plaintiff or defendant.

The second source of law is statutory law. Statutes are acts passed by a legislature and approved by the governor or president or passed over his veto. The acts when published are called session laws. There is no uniform title. U.S. session laws are called the Statutes at Large; Nebraska's are the Laws of Nebraska. Each act has a permanent number. U.S. acts are consecutively numbered as public laws, while Nebraska's retain their legislative bill number. A frequent problem may arise when a patron requests P.L. 240 or L.B. 415, for example, without giving the year or the number of the legislature. Every two years the numbering scheme is repeated, as a new Congress or Unicameral is elected.

The session laws are valuable because they give the text of a bill as enacted. We need another document, however, to give a coherent picture of statutory law currently in force without regard to the year it was enacted. The compilation of all general and permanent statutory law currently in force, arranged in a logical order, is called a code. The U.S. version is the United States Code; Nebraska's is the Revised Statutes. Both are supplied with an index and a popular name list. The latter is useful if one needs to find the text of the "Mann Act," for example, and doesn't know exactly its subject matter.

The official United States Code is limited because it is slow in coming out, and it is not annotated. An annotated code is one which gives synopses of court decisions, if any, which have construed sections of the code. An academic library should subscribe to either the United States Code Annotated or the United States Code Service. Both are kept up-to-date with annual pocket parts and monthly supplements. The Revised Statutes is annotated, and is the only Nebraska code published.

A frequent problem in using the Statutes at Large and the United States Code is an incomplete citation. A patron may need help in finding the text of "Title VII." Even assuming the person knows the reference is to federal law, there are many title VII's. If the subject is given as sex discrimination in employment, one may eventually find that the reference is to Title VII of the Civil Rights Act of 1964, P.L. 88-352, 78 Stat. 241, Codified at 42 United States Code §2000e-2. A complete citation is a great timesaver. Another problem is confusion between the section numbers in the Statutes at Large and the United States Code.

An important part of statutory law is legislative history. Librarians have an advantage here because generally they are the only ones on campus who understand its organization. Legislative history is comprised of the bill(s) introduced, amended bill, committee hearings and prints, committee reports, debate on the floor of the legislature, and the veto message, if any. Documents librarians will be familiar with these items, and the new microfiche format supplied by the GPO makes it relatively easy to collect them.

There is no significant legislative history readily available for Nebraska legislation. There was little recorded prior to 1961. Since that time debate and committee hearings have been recorded, and are available from the Clerk of the Legislature for a fee. The Nebraska Legislative Journal gives the chronology of actions on each bill, but rarely a clue as to legislative intent.

The third source of law is administrative law. Administrative law is expressed in rules promulgated by agencies. (The term "rules and regulations" is one of the many redundancies in legal jargon.) Rules are always issued pursuant to specific legislative authority. There is a specific rule-making process, set out in a statutory law, on both federal and state level. An agency must issue a notice of intention to regulate in a particular area, hold hearings and solicit comments, issue proposed rules, take more comments, and then issue the final rules if the evidence indicates they are necessary. Rules do not enjoy the high status of legislation, but they are binding on the public as law. There is an enforcement and appeal system in each agency. The dispute can eventually be brought into the judicial system. Citizens objecting to a rule may also lobby the legislature to withdraw the agency's authority for the rule.

Federal agency rules are first published in the Federal Register, a publication analogous to the session laws for statutory law. The rules are codified in the Code of Federal Regulations, which is analogous to the U.S. Code. Academic libraries should select both publications; each is a depository item.

There is no Nebraska equivalent to the Federal Register. Nebraska rules are codified in a publication called Nebraska Administrative Rules. This is similar to the Code of Federal Regulations, and academic libraries should purchase it. Academic libraries generally would not want to collect the full range of administrative decisions of federal agencies, but a school with a large journalism department, for example, may want the decisions of the Federal Communications Commission.

All three sources of law may have to be consulted to research a legal topic. For example, a patron wishing to investigate the current controversy over certification of private school teachers should look at the Revised Statutes of Nebraska, the rules of the State Department of Education, and the court decision(s) construing the statutes and rules. Undergraduate students may reject this approach and want a secondary source, but frequently there is no such source available. The student has no choice but to change the topic or to consult the original sources.

Other questions may seem quite precise but may require some digging. For example, a patron may want to know if common law marriage is recognized in Nebraska. The term "common law marriage" is not mentioned in the index or in the text of the Revised Statutes. However, the annotations in the marriage law sections in the Revised Statutes do refer to Nebraska Supreme Court cases which answer the question.

Some questions cannot be answered because they have never been addressed in case or statutory law. Would the Second Amendment of the U.S. Constitution concerning the right to keep and bear arms nullify a state law prohibiting the possession of handguns? A look at the annotated constitution reveals that the Supreme Court has never had occasion to decide this point.

The reference librarian should conduct a sufficiently detailed interview with the patron to determine if the query relates to federal or state law, or both. If the query is about a court decision, is it a reported court and are the reports in the library? If the information sought is statutory, are there also related rules? The reference librarian should have sufficient knowledge of the organization and indexing of the law sources in the library to assist the patron in their use.

The question has been raised in library literature about the unauthorized practice of law by librarians. Nebraska statutes do require a license for the practice of law. Even if the reference librarian has a license to practice, it would be neither ethical nor appropriate to give legal advice at the reference desk, free or for a fee. Most users of legal materials in an academic library are not trying to solve a personal legal problem. Aiding them in finding legal information for research and coursework would not be practicing law. The occasional patron who is seeking legal advice should be referred to the appropriate sources and given assistance, if necessary, in finding the text of the case, statute or rule.